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**Do Political Connections Matter? Empirical Evidence
from Listed Firms in Pakistan**

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(MSc, MBA, MPhil)

**Thesis submitted to the Middlesex University for the degree of
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ABSTRACT

The purpose of this thesis is to enhance understanding of the way in which political connections benefit or impair connected firms. For this purpose, the current study employs the data of Pakistani listed non-financial firms from 2002–2010, and examines the impact of political connections on the economic life of individual firms. More specifically, this thesis comprises three empirical studies: the first enquires into the way in which political connectedness influences firms' access to finance; the second empirical chapter examines the impact of political connections on the performance of the connected firms; and lastly, the third empirical chapter explores the channels through which connected politicians intervene in business operations.

The findings in the first empirical chapter provide strong and robust evidence of preferential lending in the credit market. Political connectedness appears to be a determining factor of the total and long-term leverage of the firms; nevertheless, short-term financing is indifferent to political connections. The study also finds that having connections with a winning politician or politician affiliated to the winning parties (coalition) have a larger impact on the firm's total and long-term leverage, thus implying that the benefits associated with political connections ultimately depend on electoral outcomes. In addition, firm size and business group affiliation have increasing effect on the borrowing capabilities of the connected firms, whilst connections underplay the significance of collateral.

Through the use of an instrumental variable framework focused on the long-term panel and cross-sectional data of Pakistani listed firms, the second empirical chapter finds that political connections distort the performance of the connected firms. Consistent results are found for various accounting and marketing measures of performance. So as to investigate the impact of connectedness on performance in different political environments, the sample period is stratified into two contrasting government periods: autocratic; and democratic government periods. The result is more pronounced in the autocratic regime, providing evidence of excessive managerial inefficiencies and rent-extraction of affiliated politicians in dictatorship regime. It was also found that the performance of connected firms increased further if they belonged to business groups, whilst the large firms were subject to severe performance distortions more so than small firms. Finally, those firms with low growth opportunities were more prone to the negative effects of political connectedness in terms of their performances.

The findings in the second empirical chapter (connections insert negative effect on the firm performance) inspired us to progress one step further and investigate the intriguing question: what are the channels through which politicians interfere and distort the performance of the connected firms? In quest to answer this question, the last empirical chapter provides strong and robust evidence of political intervention in the investment and employment decisions. More specifically, results find the existence of investment inefficiencies and excessive employment in the connected firms. Importantly, the effect of political interference is more pronounced for employment decisions, indicating the presence of clientelism in the Pakistani market, where politicians distribute job favours in exchange of electoral support. The study also reveals that connected firms with high growth opportunities experience political interference less often than their peers with low growth opportunities. Lastly, the economic cost of such political intervention in employment decisions is estimated to be 0.15% GDP annually.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter provides an overview of the framework of the thesis. It begins with the background information and rationale for the research. The aims and objectives of this study are discussed in the next section, followed by the contribution of the research. Finally, the structure of the thesis is illustrated in the last section.

1.2 Research background and rationale

Government policies often have significant effects on the firm's value. Therefore, it is not surprising that the firms have adopted several strategies to cultivate the relationship with government officials. Such strategies may include campaign contributions, lobbying efforts, and engaging politicians to serve on their Board of directors (Houston *et al.*, 2012). In recent years, an increasing trend of such practices has been noticed. Kang & Zhang (2011) reveal that 31.5% of their sample firms had politically connected directors in 1990; this number increased to 54.5% in 2007. Similarly, *USA Today* reports an upsurge in political connectedness amongst Fortune 1000 firms, which has risen from 39% in 1992 to 55% in 2000 (Houston *et al.*, 2012).

The outbreak of the most severe East Asian financial crises of the late 1990s has instigated an investigation into the effects of political connections on corporate economic outcomes. The aspect that has been amply borne from the nascent literature is the distinction between the relationship-based financial system prevalent in many developing countries, as well as the arm's-length financial system that generally characterises developed economies (Charumilind *et al.*, 2006). Although the phenomenon of political connection is pertinent to countries all

around the world, it remains widely argued that the prevalence of political connection is considerably higher amongst developing countries with relationship-based financial system (Desai & Olofgard, 2011). In developed countries with well-functioning financial systems connections complement formal contracts to make deals work smoothly; however, where enforcement of law is weak, informal relationships can serve as a substitute in facilitating the deals to be made (McMillan & Woodruff, 1999). Fundamentally, reliance on political connections stems from inadequacies in formal institutions that make arm's-length contracting unreliable; therefore, in economies with weak institutions, where politicians have enormous discretion or not much accountability, connections to those in power are more valuable for firms.

In fact, firms with close connections with politically connected individuals gain favours that have large economic value. A growing body of literature documents such economic benefits as the outcomes of political connections. For instance, in a seminal study, Fisman (2001) found that the value of those firms connected to the President Suharto's family in Indonesia dropped at the time of the dissemination of the news of the President's bad health. In an illustration of political influence from the seniority system in the US Senate, Roberts (1990) showed that the sudden death of Senator Henry 'Scoop' Jackson in 1983 caused an abnormal drop in the stock returns of firms contributing to his re-election campaign. Noticeably, at the same time, firms connected to his successor as ranking member of the Senate Armed Services Committee, Senator Sam Nunn, witnessed an unanticipated rise in stock returns. Similarly, Jayachandran (2006) documents the announcement effects of Senator Jim Jeffords' decision to leave the Republican Party in 2001 on firm performance: in a result of this move, the control of the US Senate was tipped from Republicans to Democrats. The study finds that this

particular decision resulted in an almost 1% decline in the market value of firms that contributed to the Republicans.

In developing markets, the most prevailing manifestation of political connectedness is preferential bank loan, characterised as a higher debt ratio and a lower interest rate. This notion is supported by several empirical evidences. Indeed, Charumilind *et al.* (2006) find that political connections are, by far, the most important determinant explaining firms' long-term leverage in Thailand. In a cross-country study, using firm-level connections to politicians and ex-politicians as a proxy of political connectedness, Faccio (2006) examines the degree of firm leverage amongst connected firms. Results indicate that connected firms make greater use of leverage than their non-connected counterparts. This pattern is more pronounced in the context of developing markets. Finally, Claessens *et al.*, (2008) bring to light preferential lending as a possible channel politicians utilise to repay firms' contributions. Their results show that connections induce strong positive impacts on bank leverage during the years following the federal deputy election. From a theoretical perspective, the positive impact of connections on the firm leverage somewhat challenges the view of Trade-off theory, which is known to reflect the influences of taxes and costs of financial distress. More specifically, it suggests that the optimal debt–equity ratio of a firm is determined by balancing the benefits of the tax deductibility of interest payments against bankruptcy costs; however, the cheap credit to connected firms indeed decreases the expected cost of financial distress, thereby influencing the debt–equity balance. Likewise, the easy accessible credit to connected firms entices managers to use higher leverage, which fundamentally contradicts the suggestion of Pecking order theory (internal capital would be preferred over leverage).

In a sharp contrast, there are various studies depicting the inverse or complete lack of relationship between political connections and leverage: for instance, Bunkanwanicha & Wiwattanakantang (2009) do not observe the preferential access of financing for Thai connected firms. Indeed, the connected firms are found to use leverage equivalent to benchmark non-connected firms. Similarly, consistent with this view, Dombrovsky (2008) finds no effect of politicians' strength on the preferential credit of the connected firms. Taken together, in view of such conflicting arguments, the relation between firms' financing decision and their political connections is ultimately an empirical question.

Similarly, the view that political connections insert positive impact on performance of the connected firms is also considered as contentious amongst researchers. The existing empirical evidence acknowledges both positive and negative returns to political connections in terms of corporate profitability. Considering the positive impact, there are a number of reasons as to why politically connected firms might show superior performance to their non-connected counterparts. Firstly, and perhaps most importantly, the preferential access to credit leads to a competitive advantage for a firm, and thereby maybe translated into better performance (Faccio, 2006; Li *et al.*, 2008). Secondly, politicians are commonly outsiders to the corporate world, and thus may prove beneficial to the firm by providing an independent view that eventually positively affects firm performance (Niessen & Ruenzi, 2010). Thirdly, politicians are generally better informed about the imminent economic policies, with such insight potentially having positive impacts on firm performance. In contrast, studies advocating the negative relationship between political connections and firm performance argue that a politically connected Board does not have managerial incentives to maximise shareholders' wealth and improve overall firm performance (Boubakri *et al.*, 2008; Faccio, 2010). Furthermore, other studies, such as that by Dewenter *et al.* (1997), suggest that politically

connected firms forgo maximum profit in the pursuit of social and political objectives. It follows from provided evidences that whether connected firms are more or less efficient than firms without such connections is primarily an empirical issue.

Despite the volume of research centred on the role of political capital in developing economies, relatively little is known about the precise form firm-level political influence takes or its outcomes. Contemporary scholarship views one side of the relationship, and examines the way in which firms benefit from political connections; however, the detrimental effects of political connections on firms are largely ignored in the research agenda. The only notable empirical work dealing with this issue is that by Chen *et al.* (2011), who argue that political intervention distorts a firm's investment behaviour and ultimately results in investment inefficiency; however, the work does not consider other channels of political intervention that may also lead to corporate operational inefficiencies. Thus, there is a strong need to investigate such alternative channels through which politicians may intervene and influence the business operational efficiencies.

Throughout the course of this thesis, this line of inquiry is pursued further by investigating both the financial benefits that political connections may offer, as well as the effects of those connections on firm operational efficiencies and performance. The study is conducted using data from Pakistan, which offers a unique research setting for the study of the nexus between business and politicians, and its possible implications for business decisions. First, politics in Pakistan has been linked closely to clientelism, rent-seeking, and corruption. This is evident from the Index of Economic Freedom, co-published by The Heritage Foundation and the

Wall Street Journal¹. The index consistently ranked Pakistan as one of the most corrupt countries in the world. During the past decade and a half, three elected prime ministers and their respective assemblies were dissolved on identical charges of maladministration, corruption, and political patronage; such a circumstance reflects clearly the widespread extent of political corruption in the economy, which also has a significant impact on firm behaviour. Given the weak legal system and the higher extent of corruption, the value of political connections is likely to be greater in Pakistan than in other countries on the similar stage of development (Khwaja & Mian, 2005).

A second important reason for the focus directed towards Pakistan lies in the diversity of data. Earlier studies from developing economies have taken political patronage in a limited sense, where corporate political benefits can be extracted by affiliating with a single powerful politician (i.e. Suharto in Indonesia and Mahathir in Malaysia). On the contrary, in Pakistan many politicians can benefit their affiliated firms. This is owing to the fact that the political system in Pakistan is mainly dominated by several influential families which are recognised as having economic incentives to remain in politics. In addition, the ability to extract the political benefits varies depending on the political strength of a politician. In this regard, Pakistan offers useful variation in terms of the type of political connections that can be used to examine this phenomenon.

Third and finally, during last decade, Pakistan undertook drastic steps to curb political corruption. A new law stipulated that public officials must declare their assets. Moreover, the National Anti-Corruption Strategy (NACS) was introduced in 2002 with the aim of

¹ Recently, in year 2009, Pakistan is ranked 139th out of the 180 countries featured in the index. More details are available at <http://www.heritage.org/index/freedom-from-corruption>

eliminating corruption from the political system. Nevertheless, a number of sceptics have since questioned the efficiency of such initiatives, as the accountability process is obstructed in several ways, such as through a constitutional bill introduced to exempt judiciary and armed forces from accountability, and the National Reconciliation Ordinance (NRO) that granted amnesty mainly to politicians that were accused of corruption and embezzlement. Therefore, whether or not connected firms in Pakistan indeed benefit from political favours under the reformed period remains an open question.

1.3 Objectives of the study

Attracted by the anecdotal evidence on the nexus between business and politicians, a burgeoning recent literature investigates the phenomenon of political patronage in countries around the world. Importantly, politicians have been known to form close affiliations with businessmen through conferring favours, which commonly adopts the form of contract rewards, privileges enshrined in regulatory conditions, and access to financial resources. Subsequently, large numbers of studies have documented that political ties grant preferential access to financing, which ultimately improves firm performance². Nevertheless, an opposite view is held, which emphasises that political connections cause inefficiency, just as any other preferential or merely distinctive treatment of some agents, which subsequently averts efficient equilibrium outcomes (Fan *et al.*, 2007). Following such contradictory evidences on the implications of political connections, it is worth examining further the economic consequences of such relationships. Moreover, the specific nature of political patronage varies from country to country depending on its institutional, political and regulatory environment (Desai & Olofgard, 2011); therefore, it is of great interest that the business–

² Detailed review of this literature is provided in the chapter 2.

politics relationship be studied in the context of Pakistan where socio-economic facets are similar to other developing countries, albeit some context-specific political characteristics.

From the above, it is safe to assume that political connections have positive influence on firm performance (e.g. Niessen & Ruenzi, 2010; Li *et al.*, 2009). Considering the complexities inherent in the business–politician nexus, the study belongs to a rare cohort which questions the above assumption by witnessing inverse relationship where existing political connections have led to poor firm performance. Consequently, taking one step further, the researcher seeks to draw possible antecedents for the underperformance of connected firms by examining the mechanism of political interventions in business operations, ultimately leading to operational inefficiencies and poor performance.

Specifically, the main objectives of this study are as follows:

1. To investigate whether or not political connections facilitate connected firms in terms of accessing leverage.
2. To analyse the impacts of political connections on firm performance.
3. To investigate the channels through which politicians may influence the business operational efficiencies.

1.4 Contributions to the body of knowledge

This research focuses on the aforementioned objectives, which are driven mainly by the gaps in contemporary research and the practical importance of the issues addressed. Hence, in

order to achieve the goals of study, three independent empirical studies have been conducted; thus, it seems logical to highlight the contributions respectively.³

Theoretical Contributions

Focusing on the first analysis (Chapter Four), the study contributes to the capital structure theories by identifying one of the idiosyncratic firm level facets that has received very limited attention in the earlier literature (e.g. Frank & Goyal, 2009; Walsh & Ryan, 1997)—that of corporate political connection. In particular, the study reveals that firms with political connections may evade financing frictions owing to privileged treatment from government-owned enterprises, mainly banks. Consequently, these firms do not necessitate physical assets as collateral to overcome the problems—mainly information asymmetry—inherent in the credit market. Thus, the predictions of Trade-off and Pecking order theories in regard to tangible assets do not precisely hold for politically connected firms⁴. In addition, considering the privileged treatment in the credit market, the ease of access to credit allure connected firms to maintain high leverage that contends the proposed financing hierarchy of Pecking order theory. When considered together, by reviewing political connection as a determining factor of firms' financial decision, this study extends the Trade-off and Pecking order theories into the political strategy field.

Subsequently, whilst investigating the impact of political connections on firm performance, the next study (Chapter Five) adds to the Agency theory in the field of corporate governance.

³ Additional details on the contributions of each study are also provided in the respective empirical chapters.

⁴ Trade-off theory indicates that the firms utilize physical assets as collateral to provide lenders with security in the event of financial distress. Similarly, Pecking order theory also predicts a positive relationship between collateral and leverage, and asserts that physical assets as collateral reduces the information asymmetry between firm and lender.

Results demonstrate that politicians exacerbate the agency problems by coercing management to engage in self-interested actions that protect their interests, thus deteriorating firm performance. Importantly, this is the first investigation of its kind to find political environmental context (democracy or autocracy) does matter to the intensity of agency problems that ultimately affects firm performance. As a whole, the study emphasises the importance of understanding the role of firm political connectedness in examining agency problems, specifically from an institutional perspective, previously unexplored in Agency theory, which ultimately impacts the firm performance.

Finally, the last part of the thesis (Chapter Six) also embarks on The Agency theory by explicating the mechanism through which political connectedness affects firms' economic decisions. More specifically, the study demonstrates investment inefficiencies and excessive employment as channels through which politicians intervene in business operations, which ultimately averts the firms from making optimal decisions. By showing political intervention acting as another friction that increases agency costs for connected firms, this study adds another dimension to understanding of Agency theory. On a related note, the examination of more than one channel of political interference—as a source of agency problem—has not been investigated in prior research. Furthermore, this study also contributes to the corporate investment literature based mainly on standard corporate finance theories, such as Trade-off, Pecking order, and Agency cost theories (Heinkel, 1982; Shyam-Sunder & Myers, 1999; Hoshi *et al.*, 1991). However, we find that political forces play a significant role in the investment decisions of the firms; thus, the political aspect warrants inclusion whilst examining corporate investment behaviour.

Empirical Contribution

The first study (Chapter Four) contributes to empirical literature in two main ways. Firstly, it aims to extend research on the effects of political connections (e.g. Braggion & Moore, 2011; Boubakri *et al.*, 2008; Faccio, 2006) through providing empirical evidence that political connectedness helps in accessing external finance. In doing so, the study contributes uniquely to the literature by considering the debt maturity structure, and by further examining the effectiveness of political connections in accessing short-term and long-term debt, each separately. Additionally, the study takes a step further and conducts a series of tests with the objective to show that the results vary across the strength of affiliated political figures. More directly, it examines empirically whether privileged access to finance is dependent on the electoral outcome for connected politician. The second contribution of the study lies in the investigation of whether the standard firm-specific determinants of leverage—known to be associated with financing decision—hold any significance for politically connected firms. Henceforth, we empirically test that the predictions of traditional theories on the firm-specific determinants of leverage may alter due to firm-level political influence. The prior studies on political influence and finance have remained profoundly focused on the East Asian economies (e.g. Bunkanwanicha & Wiwattanakantang, 2009; Fisman, 2001)⁵ and Western economies (e.g. Infante & Piazza, 2010; Ferguson & Voth, 2008). Although economies such as Pakistan—where the market system and redistributive mechanism coexist—the extent of political patronage is seen to differ from the aforementioned economies (Cole, 2009). Moreover, it has been observed that the relationship between political connections and finance is more context-specific than universal; nevertheless, no other study carried out thus

⁵ The event of East Asian financial turmoil of 1997-1998 has stimulated the research on the relationship between corporate political ties and financial market (Charumilind *et al.*, 2006).

far has addressed this issue in Pakistan. The only notable exception is that of Khwaja & Mian (2005), who employ data on bank loan portfolios and report that connected firms receive credit amounting to almost twice that of other non-connected firms, and have a 50% higher default rate on these loans. Such a lending pattern is more prominent amongst state-owned banks in contrast to private ones. Furthermore, they provide direct evidence against the social lending view under which government banks lend to socially efficient but high-risk investments. Despite the fact that they use bank loan level data and accentuated bank lending pattern, their finding that political connections matter in terms of accessing credit is consistent with our results.

Subsequently, Chapter Five examines the influence of corporate political connections on firm performance with special focus directed towards the role of the political environment in this nexus. Importantly, this study complements the existing literature along several lines. Firstly, it contributes to a burgeoning literature investigating the performance of politically connected firms. This question has been explored through taking the data from different countries, including France (Bertrand *et al.*, 2007), Germany (Niessen & Ruenzi, 2010), Thailand (Bunkanwanicha & Wiwattanakantang, 2001), Latvia (Dombrovsky, 2008) and China (Li *et al.*, 2009, 2008; Yeh *et al.*, 2012; Fan *et al.*, 2008, 2007), all of which implicitly assume that the impact of political connections does not change in different political environments. In contrast, this study underscores the importance of the varying nature of political systems, in particular the autocratic and democratic regimes, and further highlights that the performance of the connected firms is worse in the dictatorial regime. To the best of our knowledge, this study is the first to analyse how political connectedness affects firm performance in contrasting political environments. Secondly, this study seeks to identify whether the impact of political connectedness on firm performance could be shaped by growth opportunities

available to a firm. However, although previous studies have extensively documented the relationship between growth options and firm performance (Chow *et al.*, 2011; Ho *et al.*, 2004; Gaver & Gaver, 1993), it has generally been overlooked in the political connection's perspective—a gap this study aims to fill. Thirdly, the study establishes that the impact of political connectedness on firm performance is subject to political environment and the growth opportunities indeed a step toward reconciling the mixed empirical findings on the effects of political connections on firm performance. Finally, the study offers implications for other economies that exhibit patronage system similar to that of Pakistan. For instance, corporate political connectedness and state-controlled resources are common phenomena in countries such as Russia, China, India, Cuba, Malaysia, and Indonesia; therefore, the findings of the present study can be generalised to those countries.

Finally, the last empirical chapter (Chapter Six) offers an array of contributions to the corporate political connections literature. Firstly, the study answers the call made by a number of scholars in the field to bridge the gap in our understanding regarding the consequences of political relationships. By showing investment inefficiencies and excessive employment as direct avenues through which political connections distort firm operational efficiencies, it adds further evidence to the new and growing literature on the implications of political relationships (e.g., Fraser *et al.*, 2006; Yeh *et al.*, 2012; Boubakri *et al.*, 2008) which largely explains the positive impact of political connections. Secondly, although not the immediate focus of this study, our empirical specifications also test and confirm earlier studies investigating the influence of growth opportunities and cross-industry heterogeneity on corporate economic decisions. Lastly, new evidence is added to the economic literature examining the nexus between resources distribution and social welfare loss (i.e. Kurer, 1993)

by providing a sense of economy-wide costs caused by political intervention in business decisions.

In summary, the thesis accentuates the significance of political connections and their economic outcomes to business practitioners. The results of this research allow us to understand why and under what circumstances firms would engage in political activity, as well as how political connections may help firms in terms of improving operational efficiencies and performance in less developed economies.

1.5 Structure of the thesis

Chapter Two lays the foundation of this study by introducing the phenomenon of corporate political connections. It is followed by the presentation of the antecedents and consequences of political connections. In doing so, the chapter discusses the existing theoretical and empirical studies undertaken across various countries with the aim of investigating the nexus between corporate political connections and business activities. Finally, in the end, based on theoretical and empirical discussion, a few research questions are raised.

Chapter Three discusses the data sources and sample selection criteria used in this research. It also explains extensively the various techniques utilised in order to measure corporate political connections. Subsequently, industry classification and the significance of business group affiliation in Pakistan are discussed. The last section of this chapter describes the financial disclosure practices in the country.

Chapter Four attempts to provide answers to the first research question. More specifically, this chapter examines whether or not political connections is, in fact, a good predictor of

preferential access to leverage in Pakistan. In so doing, the relationship between politics and business in Pakistan is first described, with the sub-hypotheses for the chapter developed subsequently, with an appropriate econometric methodology discussed. Lastly, empirical findings are reported and discussed.

Chapter Five introduces the second empirical investigation based on the second objective of the study. More specifically, it investigates the impact of political connections on firm performance. The Pakistani political system and the context of the pertinent elections is described, with the presentation of sub-hypotheses and econometric methodology presented subsequently. Following, in the last section, empirical results are presented and discussed at length.

Based on the third objective of the study, Chapter Six presents the empirical exploration into the relationship between political connections and business activities. More directly, the channels through which politicians may influence the business's operational efficiencies are discussed, with the sub-hypotheses developed further so as to conduct the study and end up with a presentation and discussion of the regression results.

Chapter Seven concludes the thesis by providing the main findings of each empirical chapter, and discusses the contributions of the study. Finally, it considers the main limitations of the study and suggests various avenues for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The objective of this chapter is to lay the foundation of this study by introducing the phenomenon of corporate political connections, and to accordingly present the antecedents and consequences of political connections. In so doing, the chapter discusses the existing theoretical and empirical studies undertaken worldwide with the objective to investigate the nexus between corporate political connections and business activities. More specifically, this chapter is organised as follows: Section 2.2 introduces and defines the concept of political connections; Section 2.3 presents the antecedents of corporate political activity, which are categorised according to firm, industry, and institutional level; Section 2.4 firstly provides the underpinning theories used in this study—namely Trade-off, Pecking order and Agency cost theories; whereas the relevance of these theories to the studies undertaken is as follows: the first empirical chapter, investigating firm leverage, is based on all theories, whilst the Agency cost theory is pertinent to the second and third empirical chapters, examining firm performance and political interventions, respectively. The last part of this section presents the studies discussing the consequences of political connections in theoretical as well as empirical perspectives. Lastly, Section 2.5 concludes by unfolding the relevant issues from the literature survey.

2.2 Definition of corporate political connections

The resource-based view of the firm claims that the firm's competitive advantage in its markets originates from its valuable resources that are not easy to imitate by competitors (Barney, 1991). Some of these resources maybe intangible in nature and idiosyncratic to the

firm, and may have been developed over a long period of time. Many of a firm's resources are relationship-based as the earning potential of these assets depends on the relationships a firm has with its stakeholders (Woods & Jones, 1995, also cited in Godfrey, 2005).

The political connection of a firm(s) is its relational asset, which reflects personal connection with government officials; this has a dual impact on the resources available as well as on firm performance. A robust operational definition of political connection can be drawn from the economic literature, where political connection is defined as the personal connection between a politician and a specific firm, either via cronyism or shareholding or directors (Johnson & Mitton, 2003; Fisman, 2001)⁶. Desai & Olofgard (2011, p. 1) elaborate on this phenomena as the arrangements by which the firms or groups—with close ties to incumbent political authority—receive favours encompassing economic value.

Scholars from a political science discipline recognise political connections as rent-seeking activities where individuals or firms seek preferential treatment from states by spending resources in lobbying or bribing. In this regard, Khan & Jomo (2000) identify the conditions under which these activities can be categorised. At the very least, three settings are presented: in the first, firms privately negotiate changes in rights in the absence of state involvement, with the underlying condition being that the gainer always compensates the losers (for instance, firms intra industry negotiations to set the level of supply and prices in the market); the second scenario describes the rent-seeking practice in which the firm attempts to influence the state (which enforces rights and contracts) by lobbying, bribing, or otherwise through political influence, with the gain from such rent-seeking activity directly depending

⁶ In this study we employ the definition of the firm's political connectedness as the personal connection between politicians and specific the firms through directors.

on the spending power of the firm; in the last scenario, rent-seeking activity is initiated and created by the state, where the state no longer passively responds to influence, but is a rent-seeker (typical example is the role of state-owned firms in Russia and China). In practice, the first type of rent-seeking is obsolete in the real world as differences in power between the firms would discourage the stronger from compensating the loser. Although the rest of both scenarios are more pertinent to the real market, the concern of this study can be seen in the second scenario, where a firm influences the underlying criteria of resource distribution, which is set and controlled by the centralised administrative authority of a polity.

In contrast, economists have centred on the exchange view of politics, and have further described the interdependence of suppliers and the demanders of resources (e.g., Hillman & Hitt, 1999; Hillman & Keim, 1995; Keim & Zeithaml, 1986). The demanders comprise the interest groups and the firms that contend for scarce resources, whilst suppliers are those who control state resources, such as elected politicians and regulatory agents. From the supplier's standpoint, the resource distributors face considerable information and resource constraints; thus, they have needs of both financial and information resources (Schuler *et al.*, 2002)⁷. On the other hand, Hillman & Hitt (1999) argue that demanders can participate in this transaction by offering information, votes, and financial support. Nevertheless, the decision of individual firms to participate in political activity is solely hinged on the analysis of costs and benefits. Thus, whether or not a firm establishes political connection is an outcome of costs and benefits analysis.

⁷ For instance, firms provide information about policy details to legislators through lobbying, which subsequently decrease the inherent uncertainties in new legislation (Aplin & Hegarty, 1980).

During the last two decades, the literature on political capital has dedicated a great deal of attention to the working of political connections. In particular, such studies aim to investigate the reasons behind why firms become politically active, and the outcomes of such political engagements. Based on existing empirical studies, the following three general conclusions can be drawn: (a) the state plays a determining role in business operations; (b) the level of political activity differs dramatically amongst firms or industries; and (c) political connections have performance implications (Hillman, 2003). In what follows in this chapter, the antecedents and consequences of corporate political connections are reviewed in detail.

2.3 Antecedents of corporate political connections

The interpenetration of political and economic power intensifies the significance of political connections for businesses around the world. The firms endeavour to establish political connections, which subsequently enhances their chances of success (Boubakri *et al.*, 2008). In principle, political connections benefit both parties: the politicians hand out rewards in the form of policies and privileges to those firms against their cooperation (political and financial), whereas firms utilise these connections to enrich themselves (Boubakri *et al.*, 2008). Existing studies have identified various reasons for the engagement of firms in political relationships; these reasons can be categorised at the firm, industry and institutional level.

At a firm level, scholars recognise the political relationship as a pervasive strategic choice centred on enhancing the firm's overall value. In designing their corporate strategies, the firms systematically seek to anticipate and exploit opportunities in their business environment. Although many of these opportunities offer themselves in markets, the firms have the facility to generate new opportunities by investing in political connections (Leuz &

Oberholzer-Gee, 2003). Nevertheless, the decision to become politically active largely depends upon the firm-specific factors, such as size, international diversification, and financial resources (Schuler, 1996).

The relative size of a firm signifies its likelihood to engage in political activity. As the establishment of political connections entails some degree of cost, it is likely that only large firms can afford to do so (Hillman, 2003). The firm diversification has also been argued to positively relate to the possibility that the firm will be establishing political connections. Diversified firms have a wide and complex range of trade interests, and are thus more likely to engage in political connections (Lenway & Rehbein, 1991). Finally, empirical studies have confirmed that financial resources are necessary in order to engage in costly political activities (Keim & Baysinger, 1988). Therefore, a firm with sufficient financial resources tends to engage in political relationships more often than firms lacking such resources.

At an industry level, industry structure, such as the industry concentration and the degree of competition are commonly recognised determinants delivering a profound effect on the political strategy of the firm (Schuler *et al.*, 2002). Such firms in industries facing intense competitive pressure find political connections increasingly important when striving to gain protection and privileged treatment from the government (Jia *et al.*, 2012). Competitive advantages stemming from political connections are highest amongst regulated and state-dominated industries. Nee & Opper (2007) find the empirical support for this conjecture, and further report that, in administrative and regulated industries, political capital—either in the form of political connections or government support—confer competitive advantage in economic transactions. The firms in concentrated industries have more incentive to establish political connections since they enjoy higher political payoffs. This view is also echoed in the

work of Schuler *et al.* (2002), the findings of which suggest that firms in a concentrated industry tend to engage in lobbying and campaign contributions more often than those in fragmented industries. Additionally, the volatility of the economic environment—which notably affects the likelihood that the government will continue to support the industry—similarly influences corporate efforts required for establishing political connections (Schuler, 1996).

At an institutional level, connections matter to the firms in both the developed and developing markets. In a well-functioning legal system, for example, connections complement formal contracts to make deals work smoothly. Where the enforcement of law is weak, informal relationships can serve as a substitute in terms of allowing deals to be made (McMillan & Woodruff, 1999). Fundamentally, reliance on connections stems from inadequacies in formal institutions, such as the legal system, which accordingly proves arm’s-length contracting unreliable. If regulatory governance is deficient, informal mechanisms—such as the embedding of economic and financial transactions in a network of social relationships—maybe viewed as an endogenous response (Charumilind *et al.*, 2006).

The extent and nature of political connections differ largely across countries based on their institutional development (Desai & Olofgard, 2011). In developed markets, for instance, the firms may use campaign finance, political action committees, and the ‘revolving door’ between lobbying firms and congressional staff offices to establish political connections. On the other hand, in less developed economies, political influence is achieved generally through a combination of kinship ties, political alliances, or direct financial dealings between the owners and the politicians (Desai & Olofgard, 2011).

In many developing economies, administrative restrictions upon economic activity are pervasive facts of life. Such restrictions give rise to power that politicians preserve so as to extend preferential treatment in terms of resource distribution and policy enforcement to those firms with strong political ties (Jia *et al.*, 2012). Therefore, the political connections with politicians and government officials in such an environment facilitate the firms to overcome obstacles in regard to conducting business efficiently.

Resting on the notion of access to credit in developing countries, firms may seek to establish connections with the most influential individuals in their system—primarily politicians—to access the firm-specific political favour, mostly in the form of easy access to leverage. Due to the slow development of market-supporting institutions, private firms in developing countries face obstacles in accessing bank leverage, which is subject to heavy government regulations. In such an environment, close relationships to politicians help firms to overcome problems relating to an ill-functioning market. Therefore, connections are more valuable in countries where supply of funds is scarce (Charumilind *et al.*, 2006)⁸. In such markets, firms might be able to access leverage simply because they have established strong ties with individuals that are able to influence bank-lending policy. Essentially, accessing leverage is one of the ultimate outcomes of corporate political connectedness. Besides, banks also have incentives to provide such loans as they expect to receive other private benefits in response (Infante & Piazza, 2010). Such benefits include bank bailout, and prospects to maintain other transactions with their debtors that are beneficial to themselves and their privately owned companies.

⁸ In addition, owing to fact that supply and demand of resources does not equally correspond to each other in developing countries consequently firms establish political connections to access these resources. Thus, the extent of political connections is more widespread in developing markets which makes them more important in such markets.

There is a literature on political connections that views such connections as an outcome of inefficient allocation of resources at both the micro and macro level. These studies suggest that, owing to inefficient distribution of capital, some firms benefit at the cost of others, and the presence of political relationships is likely to insert an adversarial effect on economic growth (Faccio *et al.*, 2006; Kang 2002). Extending this view, Ritcher (2012) argues that financial institutions may rationally select to offer privileged financing terms to connected firms as they are the only organisations in the market with the institutional support necessary to succeed. Thus, political connections are essential in order to reduce those uncertainties inherent in a weak institutional environment.

2.4 Consequences of corporate political connections

As discussed above, it is now apparent that the main objective of political connections is to receive economic benefits that are favourable to the firm's continued economic success. Economists have long noted that those firms that lobby or maintain political connections gain a variety of economic benefits in return (Mobarak & Purbasari, 2006; Fisman, 2001; Braggion & Moore, 2011); however, relatively few empirical works have argued that political relationship may potentially be detrimental to the firm value (Shleifer & Vishny, 1994; Frye & Shleifer, 1997); in fact, they rest on the argument of 'grabbing hand', where government officials (mainly politicians) can extract more resources from firms—particularly those that are privately owned—through bribes or operational inefficiencies, then conferring to the firm. Accordingly, logically speaking, it may be stated that the firm establishes political connections only if the marginal benefits of such connections are greater than their own marginal costs.

In essence, political connections provide a range of benefits to favoured firms, including preferential access to credit, preferential treatment by state-owned firms, collusive deals in tariff, the allocation of governmental contracts, relaxed regulatory oversight of the company in question, tax evasion, and government bailouts of financially distressed firms (Faccio & Parsley, 2006).

In light of the insight offered by the earlier discussion, it may be inferred that, in the quest for improved performance, firms seek opportunities in their business environment and accordingly follow strategies believed to provide competitive advantage in the marketplace. Accessing easy and cheaper leverage through their political ties is one such strategy used by the firms. As Haslag & Pecchenino (2005) also indicate, bank credits are the most prevalent source of relative advantage of the connected firms across the world. Moreover, access to leverage is an inevitable strategy for firms to develop in less developed economies, such as that of Pakistan, where the financial system is characterised by underdevelopment, widespread bankruptcies, and state control. This easier access to credit—which also confers certain cost to firms—brings *a priori* changes in the operational efficiencies owing to the political intervention in operational and financial policies of the firms, thus affecting firm performance⁹.

In the subsequent subsections, the literature on the potential impact (benefits and costs) of political connections is reviewed in three broader rubrics: financial resources, performance, and operational efficiencies. However, owing to the volume of scholarship on politically motivated financial favours—preferential credit, tax aversion, subsidies, and tariff reliefs—

⁹ Operational efficiencies here refer to the business decisions, mainly investment and employment decisions that are subject to political intervention at utmost level (Shleifer & Vishny, 1994; and Chen *et al.*, 2011).

being too great to be included in this review, the first section is instead more focused on the literature examining preferential access to credit. Finally, as the crux of this thesis is to investigate the consequences of political connections in three dimensions (leverage, performance and operational efficiencies), the aim is to provide a holistic overview of each facet, firstly by describing the impact of political connections in theoretical perspective and secondly by the carrying out are view of relevant empirical studies pertaining to each aspect.

Before we proceed, there is first a need to introduce some of the underpinning theories used in this study.

Underpinning Theories Employed in this Study

The optimal capital structure of a firm is a mixture of internal and external capital that optimises the firm's value (Bradley *et al.*, 1984); therefore, the question of how to finance or, equivalently, how much to borrow from internal or/and from external sources becomes a crucial corporate financial decision. Several theories have been put forward in an attempt to explain the financing decision of firms with an underlying aim towards maximising its value. The modern finance theories originating from the firm's market value maximisation principle are embodied in the initial proposition of Modigliani & Miller (1958). The first proposition asserts that the cost of capital—and hence the value of the firm—is irrelevant in terms of its capital structure. Since the perfect world of Modigliani & Miller (MM henceforth) does not involve transaction cost, taxes, and market frictions, the value of levered the firm is equal to the value of un-levered firm. Initially, however, the proposition of MM was considered for the firm's debt equity choices, although the applications of proposition have since expanded to all corporate financial policies. The perfect capital market that they assumed have

stimulated researchers to add the real world's elements in a quest of how theoretical predictions change accordingly. Issues such as asymmetric information, financial distress costs, transaction costs, and taxes pertain to the elements of real world, all of which are known to have an effect on corporate financing choice. Subsequent theoretical work therefore concentrates on the factors associated with market imperfections, and their impacts on the financial policy. Mainly, this research work relates to the following three main theories: Trade-off theory, Agency cost theory, and Pecking order theory.

Trade-off theory: Trade-off theory, as proposed by Miller (1977), asserts that there is an optimal debt-equity ratio, with firms attempting to minimise the overall costs of capital by balancing the tax benefits of higher debt and the greater probability of financial distress. Alternatively, it can be stated that a firm is required to select debt until the marginal benefits of using more debt equalises the marginal cost of utilising more debt (cost of financial distress), and thus the optimal capital structure located at the point at which the net benefits of using more debt amount to zero (Hovakimian *et al.*, 2001).

Agency cost theory: Aware of the bankruptcy cost of debt, Jensen & Meckling (1976) observe that the costs and benefits of any business relate to its owner until there is no separation between firm ownership and control. However, once the ownership of the firm is distributed amongst outsiders, and upon external entity taking control and making corporate decisions on the owner's behalf, the problems of interests emerge. The main objective of a firm is to maximise the firm's value. The fiduciary duty of managers—acting as agents for principals (shareholders)—is to maximise the wealth of shareholders. Since the principal (owner) is unable to observe the actions of the agent (manager) in full depth because of information asymmetry, and considering the fact that such monitoring is costly, managers

may act opportunistically to run the firm according to their own interests as opposed to those of shareholders (Hart & Moore, 1998; Sing, 2011; Fama & Jensen, 1983; Mauer & Sarkar, 2005). The opportunism imposes agency costs manifested in the aberrant actions/decisions of such include inefficient investments, consumer perquisites, and other private benefits.

Pecking order theory: This theory is based on the information asymmetry between the insiders of a firm and the less-informed outsiders, which is a vital element of the real world (Myers, 1984). The firm's managers or insiders are assumed to have more information about operations and future prospects than the outside investors. Owing to such information asymmetry between the managers and the investors, Pecking order theory suggests a preference ranking over financing sources. Beginning with internal funds (least information sensitive financial option), followed by debt, and then equity, firms work their way up the pecking order to finance investment in an attempt to minimise adverse selection costs (Leary & Roberts, 2004). The idea of financing hierarchy originates from the pioneering work of Donaldson (1961), although Mayers & Majluf (1984) present a clear theoretical rationale on the issue; they argue that, if a firm finances new investment by issuing under-priced equity, wealth would be transferred from existing shareholders to new investors; therefore, managers tend to reject the investment, regardless of its positive NPV. In this regard, Mayers & Majluf suggest that such under-investment problems can be avoided if sources of finance are switched to financial sources, which are less susceptible to underinvestment, such as retained earnings or debt. It can be inferred that, in such circumstances, internal funds and debt would be preferred to equity.

2.4.1 The impact of political connections on leverage

Theoretical perspective

Political connections may affect the traditional viewpoint of leverage theories. Firstly, Pecking order theory suggests preferring internal capital over external finance (Myers & Majluf, 1984; Narayanan, 1988), whilst leverage is regarded as a second choice since it involves costs to secure it. The easy assessable credit in the market entices managers to use higher leverage, which contradicts the suggestion of the Pecking order theory.

Managerial opportunism is an additional motive for political connections. Jensen & Meckling (1976) note that the financial resources managers spend in order to establish political connections (cost of political connections) may also induce a non-pecuniary benefit. A manager may contribute firm resources to building personal connections with influential individuals, which can provide other benefits (subsequently making the individual more powerful and facilitating access to other opportunities, etc.). In this case, unless the costs of political connection are at least offset by economic benefits, this represents an agency cost.

In a somewhat similar vein, Getz (2002) developed an agency theory-based model with firms as principals and politicians as agents, and accordingly proposed situations under which a particular political strategy would be selected. His model treats political influence as a means of agent control, and accordingly suggests that political strategy must be selected on the basis of the agency problems the firm is facing. Finally, political connections also challenge the predictions of agency theory for growing firms, which prohibits firms to use leverage in its early years of operations¹⁰. It is argued that debt repayments and unpredictable cash flows in early stages increase the costs of debt for the growing firms, thus making debt less attractive

¹⁰ Myers (1977) reported that high growth firms experience underinvest problem due to the agency cost of outstanding debt therefore predicted a negative relation between leverage and growth opportunities. Effectively, by lowering leverage directly reduces the cost of risky 'debt overhang', *ex ante*, and enables growing firms to invest more, *ex post* (Dang, 2010).

(Stulz, 1990). However, easily accessible leverage is viewed as attractive for growing firms, particularly in the early years.

Trade-off theory (Miller, 1977; DeAngelo & Masulis, 1980) emphasises the trade-off between the benefits of tax deductibility of interest payments and bankruptcy costs. Political connections may contradict the predictions of Trade-off theory in two main ways: firstly, the connected firm reduces tax liability by utilising its political relationships; secondly, connected firms are able to reduce the bankruptcy risk by having cheap credit, thus reducing the expected cost of financial distress. Empirical evidences by Adhikari *et al.*, (2006) and Faccio (2006) show that politically connected firms receive tax breaks which eventually appear in paying taxes at lower rates. Adhikari *et al.*, (2006) further report that these tax breaks often appear in the form of tax shields like non-taxable income, allowance and special deductions. In addition, connections may also facilitate firms in government bailouts.

During recent years, there has been increased concern that conventional theories focus mainly on firm or industry factors to explain firm financing pattern, which can only partially explain the degree of firm's financial leverage¹¹. Several recent cross-country studies have revealed that a significant part of the leverage pattern—which remains unexplained by traditional firm or industry-specific aspects—can be explained by institutional factors (Rajan & Zingales, 1995; Booth *et al.*, 2001; Demirguc-Kunt & Maksimovic, 2001). The corporate political connections are one of the outcomes associated with institutional settings as they stem in a response to inadequacies in formal institutions that make arm's-length financing impractical;

¹¹The East Asian financial turmoil of 1997-1998 brought into sharp focus the effect of political connections on businesses and financial market (Charumilind *et al.*, 2006). Subsequently, researchers began examining more vehemently the intricate nexus between political capital and business world.

such settings have sufficient explanatory power to account for the corporate financing pattern, and thus must be the part of theoretical considerations.

Empirical perspective

Political connectedness has been anecdotally accepted as a determining factor for corporate financial leverage. For example, political connection as a determinant of preferential access to long-term leverage is analysed by Charumilind *et al.* (2006), using the dataset of 270 Thai firms prior to the crisis period. By employing several measures for connections based on Thai largest business groups, they argue that political connections are, by far, the most important determinants explaining the firm's long-term leverage. Furthermore, surprisingly, analysis finds much less effect of firm-specific factors that standard theories of firm financing acclaims should be important for external financing, such as firm size and collateral. The study also sheds light on the financial stability of politically connected firms; it shows that, since such firms are less financially constrained owing to easier access to long-term debt, they are less vulnerable to the Asian crises of 1997. Nevertheless, in the sharp contrast, a recent study (Bunkanwanicha & Wiwattanakantang, 2009)—in the similar context investigating Thai connected firms—surprisingly do not show the preferential access of financing. In fact, connected firms are found to use leverage equivalent to their non-connected counterparts in the same industry.

In a cross-country study, using firm-level connections to politicians and ex-politicians as a proxy for political connectedness, Faccio (2010) examines the degree of firm leverage amongst connected firms. Results indicate that the connected firms make greater use of leverage than their non-connected peers. Further, leverage is higher for firms with strong

connections, i.e. those connected through their owners rather than connected through a director, and/or those connected with a minister. In Korea, according to Cho (2002), the Chaebols—which had acquired substantial control over the financial system through the ownership of the merchant banks—enjoy easier access to credit and bailouts when they are in trouble. Likewise, Siegel (2007) argues that connections with political network in Korea also increase access to key external resources, such as cheap finance and favourable land sites, etc., from abroad. In a similar vein, Infante & Pizza (2010) show that those firms with local-level political connections benefit from low interest rates; such benefits intensify when politicians are on their Board.

Based on firm level data from Brazil, Claessens et al., (2008) show that political connections have a positive relationship with bank leverage following the Federal deputy elections. After controlling Brazilian firms' characteristics, the results show that connections induce a strong positive impact in terms of the bank leverage following the federal deputy election. Such results are explained further from the perspective of volume of contribution and the way in which such contributions are distributed across different types of candidate. It was found that connections with winning candidates create a larger impact on bank leverage. The findings of this research attest to the growing literature on the role of political connections in driving firm access to finance.

The effects of the electoral cycle on macroeconomic factors in general and on bank-lending in particular are discussed in a cross-country study carried out by Dinç (2005), which covers 22 emerging economies. He reports that, in comparison with private banks, state-owned banks increase their lending during election years. In addition, loan forgiveness prior to elections increases, which consequently elevates the overdue amount to state-owned banks.

In a related study, Cole (2009) presents evidence on electorally motivated resource redistribution during the electoral cycle in India. He compares the lending practices of Indian public banks in years prior to scheduled elections to lending in off-election years. The findings indicate that agriculture credit lent by government-owned banks is substantially higher in the election period than in off-election years. More specifically, more loans were made in districts in which the ruling state party experienced tough competition than in less competitive districts. Furthermore, this targeted redistribution of resources was accompanied with substantial loan write-offs to politically supported firms.

There are studies addressing the issue of political gains in terms of higher leverage in anti-corruption campaign setting, such as that of Fan *et al.* (2008), who pursued this line of inquiry by gathering a sample of 23 most eminent corruption cases in China, involving 85 publicly listed firms during the period 1995–2003. They sub-categorised the sample into firms that bribed politicians—termed as ‘bribing firms’—and those which had established connections owing to the past job affiliations of any of the Board members—termed ‘connected firms’. Their results show that being connected with politicians either through bribes or affiliation offers firms a comparative advantage in terms of accessing debt finance; in particular, long-term debt. Importantly, such firms maintain higher debt levels overall. However, this debt advantage disappears for both connected and bribing firms once the connection is broken due to the arrest of the connected bureaucrats. Ramalho (2003) used stock market data to assess the impact of Brazilian presidential impeachment, following corruption charges, on politically connected firms’ preferential treatment. The results emphasise that directly connected firms maintain preferential access to leverage even after impeachment. In terms of firms’ value, although there was an initial loss in stock market value, one year after impeachment, however, the firms fully recovered. However, amongst

those firms indirectly, there was no significant affect in terms of access to credit or leverage ratio.

Miguel & Zaidi (2003) test the patronage effect in public expenditure distribution at the district administrative level (through which the national budget is distributed) in Ghana. The flow of public funds is observed towards areas where politicians receive stronger support. The estimated incumbency advantage, on the other hand, inserts no effect on the distribution of financial sources; however, the results of this study are subject to limitations; notably, findings were derived in a very particular setting with limited sample size, which restricts the results in terms of their capacity to be generalised to other countries.

Sapienza (2004) used Italian data on interest rates charged on individual loans to examine the credit allocation pattern of state-owned banks. He observed that the state-owned banks charge lower interest rates than private-owned banks in a winning political party-supported area. Furthermore, lending patterns are affected by the electoral results of the political party affiliated with the bank. It was found that state-owned banks divert financial resources to areas where there is more patronage; therefore, companies in southern Italy were found to benefit more so from state-owned banks' credit following the new government.

In a single-country study of Pakistan, Khwaja & Mian (2005) took individual loan level data (which is information on every credit given to firms in Pakistan) and provided evidence of state-owned banks' favouritism to firms where a politician sits on the Board. Such firms receive credit almost twice that of other non-connected firms, and have 50% higher default rate on such loans. This pattern of lending is more pronounced for large firms. In a further analysis, it was revealed that firms connected with winning politicians or politicians whose

political party wins elections obtain even greater preferential leverage from public banks. Both winning and being in the winning party enhances preferential treatment in the financial market, thus exhibiting the exercise of political power. The unique contribution of this study remains in the estimation of the economy-wide costs of rent provision to the economy, which was estimated to be approximately 2% GDP, thus complementing the contribution of Mauro (1995) and Cole (2009).

There is some scattered evidence that discusses banks' preferential treatment to connected firms from other perspectives; for instance: corporate bailouts are examined in Brown & Dinç (2004), Faccio (2006) and Hutchcroft (1998); corporate governance is studied by Yeh *et al.* (2012); and risk-taking and performance is investigated in Mobarak & Purbasari (2006), Boubakri *et al.* (2009) and Bertrand *et al.* (2007). Furthermore, the empirical study of Faccio (2006) reports that politically connected firms are more likely to be bailed-out than their non-connected peers, particularly in economies that receive International Monetary Fund or World Bank rescue packages. Similarly, firms with unprofitable but politician-backed projects were commonly granted extension very easily in corrupt capital markets.

The connections-leverage nexus is augmented with the element of corporate governance in a recent study of Yeh *et al.* (2012). Through employing duration and collateral requirement to measure the extent of preferential treatment in China, the study found that KMT- (Kuomintang-) connected firms are associated with higher non-collateral bank loans. Moreover, corporate governance is inversely related to preferential bank credit. Authors attribute this relation to the fact that firms with good governance can create other low-cost financing alternatives, thus making preferential bank credit less lucrative. This result, to some

degree, testifies the findings of Leuz & Oberholzer-Gee (2006), who note that political connections remarkably reduce the net benefits of foreign securities for connected firms.

Thus, to summarise, the existing research on the preferential access to finance to connected firms is intriguing. Essentially, firms use politicians to influence banks in order to obtain easier access to debt, and rely excessively on connected leverage. Furthermore, the belonging of a politician to a ruling party is quite a significant facet of political patronage. As shown by Khwaja & Mian and Claessens *et al.*, such a factor increases firms' or politicians' political strength in terms of obtaining even greater preferential access to credit from banks. However, although studies provide convincing evidence on favouritism to politically connected firms in the credit market, evidence on the impacts of political connections on determinants of leverage, and the degree of leverage with respect to maturity, ultimately remain scarce.

2.4.2 The impact of political connections on firm performance

Theoretical perspective

Agency theory argues that the separation of firm control and ownership potentially leads to managerial self-serving actions (Jensen & Meckling, 1976). In an attempt to overcome agency issues, politicians, as outside directors, may be able to monitor and control the management in a better manner owing to their presumed independence relative to insiders, which ultimately improves firm performance. Besides the source of financial favours, politicians, as directors, may also contribute to improved firm performance by offering insight into the imminent regulatory policies able to facilitate firms in making efficient investment decisions. Nonetheless, politicians can also exacerbate agency-associated

problems by coercing management to engage in self-interested actions that protect the interests of politician, thus deteriorating firm performance.

Empirical perspective

As discussed in the preceding section, political connections facilitate firms in terms of obtaining preferential treatment from banks—mostly in the form of easier access to leverage with lower interest rates. This easier access to external finance ultimately brings about changes in the firm's financing policy, which is linked directly to firm performance. If efficiently allocated, such inexpensive leverage has the capacity to provide politically connected firms with a comparative advantage over their competitors; such advantages should reflect favourably on their performances. On the other hand, political interference in terms of firms' management decisions—such as project selection and resource allocation—could be harmful to firm performance (Boubakri *et al.*, 2009).

In a quest to examine this relation, Boubakri *et al.* (2009) carried out a three-year event study on a sample of 234 politically connected firms. Following Faccio (2006), they define political connection as being if at least one of its Board directors is a politician or related to a politician. The findings reveal that politically connected firms increase their performance—defined as return on assets—following the establishment of political connections. Furthermore, it was also established that firms with close (direct) ties with politicians gain easier access to credit, and accordingly exhibit higher performance when compared with their counterparts' having indirect connections. In order to control endogeneity bias in their results, they instrument political connection with the firm's location in order to establish robust results.

Ferguson & Voth (2008) observe the performance of firms connected to the Nazi party, and define a firm as being politically connected if the firm has made financial contributions to the party and/or member of the Nazi party served on the supervisory Board. Findings show that connected firms show better performance, measured in terms of share price performance; specifically, they outperform non-connected firms by 5–10%. In another recent single-country study, Braggion & Moore (2011) study the interaction between firm performance and the political connections of 467 British firms. Through the use of Tobin's Q as a proxy for firm performance, it was established that connections are associated with higher performance amongst new-technology firms, although a lower performance is observed within the traditional manufacturing sector. Influencing work by Fisman (2001) investigates Indonesian firms that are connected to the Suharto family, and shows that performance in the return of shares of such firms declined more so than the return of less-connected firms, following the proclamation of deteriorating health of Suharto. Furthermore, the severity of the stock return for the connected firms intensifies when such news is more negative.

The impacts of connections with the ruling Communist Party on the performance of private-owned firms in China is investigated in a study of Li *et al.* (2008). Through applying party memberships as a measure of political status, it is revealed that performance—provided as a return on assets and return on equity—of member firms is greater than their non-member counterparts. Such connections facilitate firms in terms of improving performance through helping to easily secure leverage from banks, resolving their business disputes in court, and providing them with a greater degree of confidence in the legal system. In addition, such effects of political connections on firm performance are more pronounced in regions with less developed markets and legal systems.

An event study on the financial performance of Italian publicly traded firms during 1994–2008 was carried out by Asquer & Calderoni (2011). Contrary to widely held opinion, the negative effects of political connections on Italian firm performance were reported in terms of stock return. Once the firms were isolated according to electoral outcome, it was clearly visible that those firms connected to election losers did not gain from their respective connections; however, on the other hand, being connected with (future) governing coalition had the predicted positive effect on performance; therefore, it may be concluded that performance of the connected firms ultimately depends on the electoral outcomes. Similarly, Bertrand *et al.* (2007) analyse the performance of politically connected French firms, and subsequently conclude the presence of detrimental effects as a result of political connections. Results show that the rate of return on assets for connected firms is lower than for non-connected firms. By adopting the event study approach, Fan *et al.* (2008) examine the 23 corruption scandals and accordingly test the hypothesis suggesting that financing advantages associated with political connections do not play a role in capital misallocation, and tend to lead firms towards better performance; however, their results failed to find evidence to substantiate this proposition. Their empirical design was less subject to endogeneity concerns owing to the fact that corruption enforcement is exogenous to firms, and thus not caused directly by such firms.

In an eminent cross-country study, Faccio *et al.* (2006) report that politically connected firms are more likely to receive government bailouts during times of economic distress, and their operating performance, measured as return on assets, is significantly poorer than their non-connected peers at the time of bailout and subsequent to such bailouts. The study also presents evidence that connected firms showed worse performance just prior to the bailout than non-connected firms that are bailed out. In yet another cross-country study, Faccio

(2010) established similar results by utilising two measures of firm performance—return on equity and market-to-book ratio—with the aim of examining the operating performance of connected firms. The scholar established that connected firms are poor performers: the return on equity of connected firms was found to be lower by 5.38%, and market-to-book ratio was also found to be lower by 0.48%. In addition, the return on equity of connected firms significantly deteriorates with the level of corruption in each country, whilst market-to-book ratio does not change. In order to control the potential endogeneity in terms of the estimation, the lagged values of total assets and financial performance are used as instruments to regress connection variable.

Dombrovsky (2008) examines the similar relation amongst Latvian firms. Following the adoption of firms' total sale and growth in sales as measures for firm performance, results were found to show that firms acquiring politicians as their Board members experience a drop in sales by 40%, followed by an increase in sales amounting to approximately 75% the following year. Such results can be interpreted as either the politician joining the firm at a time of financial distress and subsequently helping the firm through political support, or that politicians predate the targeted firms in order to secure Board positions. Once connections are separated on the basis of the strength of politicians, however, a significant difference was observed. It was found that firm performance improves in the year following politicians joining the ruling coalition, with performance deteriorating substantially in the years when politicians leave the ruling coalition. However, such results are not found robust to alternative specifications of performance due to the relatively small number of firms that experience such events. In a cross-country study, Hellman *et al.* (2000) investigate firms' influencing and colluding behaviours with public officials in 22 transition economies. It was found that large firms with both formal and informal ties with the government have an influence on

shaping the rules—even without making private payments to the governmental officials. Firms with such connections grow faster and exhibit higher performance in terms of sales volume and investment level over the previous three years.

Other works focus on the role of political connections in an advanced system of the US. For instance, Jayachandran (2006) documents the announcement effects of Senator Jim Jeffords' decision to leave the Republican Party in 2001—a decision that transferred the control of the US Senate from Republicans to Democrats. She finds that this decision caused almost 1% decline in the market value of those firms that contributed to the Republicans. At the same time, firms supported by Democrats benefited from an expected rise in stock value. Similarly, a recent study carried out by Cooper *et al.* (2010) further strengthens this viewpoint through the utilisation of a new and comprehensive dataset of US publicly traded firms from 1979 to 2004. It was found that politicians—both in House and Senate—have statistically significant positive relations with future performance in terms of abnormal returns for contributing firms. Contrarily, Ansolabehere *et al.* (2004) finds no noticeable stock return difference across contributing and non-contributing firms. They investigate the soft money contributions for the Reform bill to cap the campaign contribution, and show no effect of contribution following the approval of bill. Finally, Houston *et al.* (2012) report that politically connected firms pay a lower loan spread than non-connected firms. This effect is even stronger for those firms with more government procurement, lower credit ratings, and operating in competitive industry.

In light of the above findings, it can be concluded that, despite the widely-held belief that all political connections are inherently valuable and improve firm performance, empirical evidences do not collectively support such a view. Additionally, thus far, little is known

about how and why political impact on performance varies across firms in the literature. There is the need to consider the roles of firm-level and country-level political economy factors simultaneously. Consideration to both factors concomitantly allows the building of a more complete understanding of political economy determinants of firm performance¹².

2.4.3 The impact of political connections on operational efficiencies

Theoretical perspective

The theoretical argument of agency costs (Jensen & Meckling, 1976) states that managers ought to protect the interests of the firm and its shareholders by engaging themselves in the firm's value-enhancing activities. Contrary to this prediction, Managers could engage in inefficient investments—subsequently impacting the overall operational efficiency of the firm—without worrying about career concerns owing to their relationships with the politicians.

Theoretically, the priorities of politicians do not necessarily coincide with those of the shareholders; therefore, in contrast to the wealth-maximisation objective of shareholders, politicians may want management to support their objectives. Consistent with this view, studies establish that firms with political connections are the subject of political interferences, subsequently leading to inefficient decisions (Dewenter *et al.*, 1997; Fan *et al.*, 2007).

¹² Analytical framework for this purpose is presented and discussed in Chapter 5.

Empirical perspective

The empirical literature on the impacts of political connections on operational efficiencies is quite scarce. The studies concerned slightly with operational efficiencies have, thus far, been confined largely to the political impact on firm performance. As such, on the basis of research outcomes, the studies deduce that the beneficial (detrimental) effect of connections on performance is interpreted as the political intervention being favourable (unfavourable) for the firm that enhances (undermines) corporate operational efficiencies.

A first stream of literature that finds positive effects of political connections infers the augmented operational efficiencies of the firms. Ferguson & Voth (2008), for instance, observe the positive effects of firms' relationships with the Nazi party on firm performance. They conclude that such political ties enhance the operational efficiencies of the firms, thereby performance. Li *et al.* (2009) and Fan *et al.* (2008) also interpret their findings in a similar fashion when considering Chinese firms, where such an effect is even stronger in regions with less developed markets and weak legal systems. A similar study (Dombrovsky, 2008) examines the effectiveness of corporate political activity, and provides improved performance and operational efficiencies of affiliated firms, soon after politicians join firms.

In contrast, a relatively smaller series of papers showing the detrimental effects of political relationships on performance imply that such ties result in low operational efficiencies. For instance, Faccio (2010) reports that connected firms are poor performers, thus suggesting that connections impair operational efficiencies and firm performance. In a similar vein, Asquer & Calderoni (2011) provide compelling evidence of the detrimental effects of political relationships on the operational efficiencies of Italian firms.

The empirical works that have been dedicated to investigating the direct impacts of political connections on operational efficiencies are focused mainly on excessive employment. In an influential paper, Shleifer & Vishny (1994) highlight that self-interested politicians use their political power to interfere in the affiliated firms for their own objectives. Consequently, managers of the connected firms pursue strategies that satisfy the political objectives of the connected politician, which subsequently undermines operational efficiencies and distorts performance. They further explain that politicians mainly intervene in employment decisions and demand for politically motivated employments, which is an action that ultimately distorts business efficiency. In another important study, Bertrand *et al.* (2007) examine the political intervention in corporate employment decisions. Their results show that the performance of connected firms is lower than non-connected firms owing to excessive employment. They further highlight the fact that connected firms adjust their employment level and plant creation (and destruction) practices in ways that are consistent with helping incumbent politicians in their bid for re-election. Such employment practices are destructive for performance; therefore, low performance amongst connected firms is observed, which is driven mainly by higher labour cost.

Table 2.1: The review of empirical literature: Major results of selected empirical studies

Authors	Results
Ansola-behere <i>et al.</i> (2004)	<ul style="list-style-type: none"> • This study challenges the belief that firms use their campaign contributions to shape policy and avail substantial benefits from the government. Results find no apparent changes in the market valuation of profitability of donating firm.
Asquer & Calderoni (2011)	<ul style="list-style-type: none"> • Contrary to most studies, their results show that political connections insert negative effect on performance in terms of stock return in Italy. • The firms connected only to future governing party have positive effect, whereas maintaining connections with opposition have no effect on firm performance. • Indirect connections have a noticeable positive impact on firm performance, while direct connections insert negative or no effect on stock return.
Bertrand <i>et al.</i> (2007)	<ul style="list-style-type: none"> • Study investigates the political intervention in corporate employment decisions. Their

	<p>findings reveal that presence of political directors on board significantly increases the level of excess employment in firm that ultimately inserts negative impact on the corporate operational efficiencies.</p> <ul style="list-style-type: none"> • Particularly, firms adjust their employment level (through hiring and firing) and plant creation (and destruction) practices according to the demand of connected politician.
Boubakri <i>et al.</i> (2009)	<ul style="list-style-type: none"> • Politically connected firms increase their performance after the establishment of their relationships. • Study also confirms that the connected firms gain preferential access to cheap credit. • This effect is even stronger when firms have closer ties with political power.
Bunkanwanicha & Wiwattanakantang (2009)	<ul style="list-style-type: none"> • The result contradicts the notion that political connections improve access to finance. In fact, the connected firms are found to use leverage equivalent to their non-connected counterparts in the same industry.
Charumilind <i>et al.</i> (2006)	<ul style="list-style-type: none"> • Results from analysis of a detailed dataset on Thai firms before the Asian crises, support the idea that connections allow to have easier access to long-term debt. • Political connections replace the role of collateral for long-term debt. • Such firms were proven to be less vulnerable to crises of 1997, owing to their ability of accessing long term debt.
Claessens <i>et al.</i> (2008)	<ul style="list-style-type: none"> • Political connections insert strong positive impact on the bank leverage. • Leverage of firms that made contributions to candidates affiliated to the winning party increased in the following years of election.
Cooper <i>et al.</i> (2010)	<ul style="list-style-type: none"> • Their results show the positive economic effects for the firms that contribute to political candidates in the House and Senate.
Cole (2009)	<ul style="list-style-type: none"> • Find evidence of political lending cycles. • Lending is targeted towards areas where the ruling party won or just lost the election by small margin. In addition, rate of loan write-offs were also greater in those areas. • Target lending was observed prior to the election and write-offs were noticed following the election.
Dinç (2005)	<ul style="list-style-type: none"> • Presents cross-country evidence that politicians use state-owned banks for their political objectives. More specifically, government banks increase their lending and loan forgiveness in election years.
Dombrovsky (2008)	<ul style="list-style-type: none"> • Firms that acquire politicians on their Board experience a drop in performance, followed by an increase in the following year. • Results found no evidence that ex-politician affect firm performance.
Faccio <i>et al.</i> (2006)	<ul style="list-style-type: none"> • Connected firms are more likely to receive government bailouts in times of financial distress than their non-connected peers across the world. However, this pattern is more pertinent to countries that are perceived as highly corrupt.
Faccio (2010)	<ul style="list-style-type: none"> • Firms with political ties make greater use of leverage, but they underperform compared to their non-connected peers. • This difference between connected and non-connected firms is more pronounced when political relationships are stronger.
Fan <i>et al.</i> (2008)	<ul style="list-style-type: none"> • Presented evidence of higher leverage, particularly long-term debt of connected and briber firms before; and significant decline in leverage following the corruption scandals. • Results remained robust after including various leverage and maturity measure.
Fisman (2001)	<ul style="list-style-type: none"> • Study reports the impact of connections on performance by measuring the returns of shares of the connected firms. • Findings indicate that performance of these firms dropped following the proclamation of deteriorating health of Suharto. • The power of event study model is strengthened by aggregating a number of episodes

	during which there were rumours about the Suharto's health condition, and affirms the negative returns of the connected firms.
Jayachandran (2006)	<ul style="list-style-type: none"> • The finding reveals the significant relationship between political connections established through electoral denoting and firm performance in terms of stock return. The loss of about 1% of market capitalisation is observed following the Jeffords' party switch for a firm that had denoted \$250,000 as electoral contribution.
Khwaja & Mian (2005)	<ul style="list-style-type: none"> • Political firms borrow about 45% more and have 50% higher default rates than non-political firms. • Preferential lending is more pronounced for the large firms. In addition, both winning and being in the winning party enhances preferential treatment in the financial market, exhibiting the exercise of political power. • Study estimates the economy-wide costs of the rents, which is between 0.30–1.9% of GDP annually.
Leuz & Oberholzer - Gee (2003)	<ul style="list-style-type: none"> • This study tests the hypothesis that global financing and political connections are substitutes. • Well-connected Indonesian firms are less inclined to access global capital market, since these firms are able to get low cost capital from the domestic banks.
Sapienza (2004)	<ul style="list-style-type: none"> • Using a large dataset of Italian firms they find that government owned banks charge lower interest rate than do privately owned banks. • Firms located in Southern part of Italy (winner party's supported area) benefit more from state-owned banks.
Shleifer & Vishny (1994)	<ul style="list-style-type: none"> • Connected politicians desire to maximise their political support by maintaining high employment level which results in deteriorated firm operational efficiency.
Siegel (2007)	<ul style="list-style-type: none"> • Political network significantly increases the rate at which Korean firms access to key outside resources from abroad. These resources include cheap finance and favourable land sites.

2.5 Conclusion

This chapter first describes the phenomenon of political connections. Subsequently, the antecedents of political connections are discussed at firm, industry and institutional level. Finally, the chapter reviews the theoretical and empirical studies discussing impacts of political connections—stemming as a result of inadequacies in formal financial institutions—on the degree of financial leverage, performance, and operational efficiencies. Prior to this comprehensive review, a brief description of underlying theories used in this study is presented.

Political connection is the personal connection between politicians and a firm, either through cronyism, or shareholding or directors. It is viewed as a type of relational asset through which

firms or groups with close ties to an incumbent political authority receives favours that have economic value. Fundamentally, the firm endeavours to establish political connections as this enhances its opportunity to succeed. At a firm level, firm size, international diversification and financial resources are important determinants of political connections, whereas industry concentration and degree of competition are regarded as important industry-specific factors that determine the likelihood of firms' political activity. Finally, at an institutional level, political connections are viewed as being an endogenous response of inadequacies in the formal system.

An anecdotal evidence on the relationship between politicians and firms (Fan *et al.*, 2008; Dinç 2005; Khwaja & Mian, 2005) documents that firms with political connections enjoy exceptional access to government loans, and are more likely to employ excessive leverage in financing decisions. This view predicts a positive relationship between corporate political connections and the degree of financial leverage. However, there are studies depicting the inverse or a complete lack of relationship between political connections and leverage (Bunkanwanicha & Wiwattanakantang, 2009; Asquer & Calderoni, 2011). When considered together, existing research yields mixed results. Thus, in light of such diverse findings, it is still difficult to draw any definitive conclusion regarding the impact of connections on firm leverage.

Securing finance at preferential terms is a widely adopted channel through which political connectedness pays off. If this excessive debt is allocated efficiently, it should be reflected positively in the performance of the connected firms. Empirical evidences support this notion, and further show that political connections translate into better firm performance (Li *et al.*, 2009; Dombrovsky, 2008; Ferguson & Voth, 2008). However, there are numerous studies

that provide evidence of a negative correlation between firm performance and political connections, mostly because of political involvement in management decisions (Asquer & Calderoni, 2011; Bertrand *et al.*, 2007). Additionally, connection-performance nexus is documented mainly through privatisation literature (Boubakri, *et al.*, 2008; Cuervo & Villalonga, 2000). Accordingly, due to the inconclusive impact of political connections on performance, it is difficult to predict the direction of relationship.

Theoretically, the priorities of politicians do not necessarily coincide with those of the shareholders: politicians want management to support their objectives rather than pursuing the wealth-maximisation objective of shareholders. Consistent with this view, studies indicate that connected firms are subject to political interferences, which subsequently result in poor performance (Dewenter *et al.*, 1997; Boubakri *et al.*, 2008; Fan *et al.*, 2007). Although these studies agree on the political intervention in the corporate operations as a reason for underperformance, the mechanism of such interventions has generally been overlooked. Hence, the channels through which such interventions are carried out and which lead to operational inefficiencies are an issue worthy of future research.

The overall discussion raises a number of unresolved questions:

1. Do predictions of standard capital structure theories hold for politically connected firms as well? Are benefits of political connections in terms of leverage are uniform across debt maturity structure? What type of firms is more likely to benefit from having connections with politicians? Do relationships with politicians with different levels of political strength (political influence) induce different impact on a firm's leverage?

2. How do political connections affect agency costs, and where do connected firms stand performance-wise in comparison to their non-connected counterparts? Under what political environment are firms more likely to benefit from their connections? What are the other factors that shape the impact of political connections on firm performance?

3. What are the channels of political interventions? How does political intervention affect corporate operational inefficiencies? Does political intervention uniformly affect all firms? Does political intervention differ across industries?

CHAPTER 3: DATA AND FINANCIAL DISCLOSURE PRACTICES IN PAKISTAN

3.1 Introduction

The review of underpinning literature and related empirical studies in the previous chapter identifies the research gap and direction of this research study. This chapter provides the research methodology of this study. The chapter is organised as follows: the first section demonstrates the data and study sample by explaining the sources of data, the type of data collected, and the sample selection criteria; Section 3.3 presents the techniques utilised in order to measure the political connections in earlier studies; Section 3.4 introduces the industry classification criteria used in this study; Section 3.5 discusses the presence of business groups in the Pakistani market; finally, financial disclosure practices in Pakistan are reviewed in the last section.

3.2 Data collection and sample specification

This section discusses the construction of sample data used in this study. It also describes the data sources, and further presents information relating to the guidelines for the sample selection.

3.2.1 Sources of data

In order to conduct this study, three data sources are used. First, the firm-level financial information used in this study comes from the OSIRIS, which is a Bureau Van Dijk's publication. OSIRIS provides globally standardised financial accounts of over 70,000 listed

firms from all over the world—up to approximately 10 years¹³. In addition to the financial statements—income statement, balance sheet, cash flow statement and ratios—information regarding the Board members of each firm is also included. From this database, the Pakistani firms are selected. Secondly, in order to identify the group affiliation of firms, this research relies on the book by Rehman (2006), which reports the list of top business groups (based on their size) and their associated firms within the Pakistani market. The similar source for identifying the business group affiliation in Pakistan has also been used in several other studies, such as those of Masulis *et al.* (2011), Ashraf & Ghani (2005), and Candland (2007).

Nevertheless, although access to the published financial report of Central bank of Pakistan (State bank of Pakistan) on listed firms on Karachi stock exchange and DataStream were available; however, the number of firms in these sources was smaller than those available in OSIRIS. In addition, the OSIRIS database is considered superior for this study as it covers more years and provides information on the ownership structure.

Third, in order to measure the firm's political connection, dataset on political actors at national and state level is required. This political data is taken from Election Commission of Pakistan (ECP), which conducts elections for the National and Provincial Assemblies. It maintains the comprehensive information on national and state elections, including candidates list, parties' positions, and electoral outcomes. Khwaja & Mian (2005) employed the same dataset to identify the political connections in the Pakistani market.

¹³ OSIRIS globally collects financial data from diverse set of sources with different accounting standards, and subsequently standardizes it which is comparable across countries, industries and firms. So, if a country changes its accounting standards it does not affect the data provided by OSIRIS. In any case, Pakistani listed firms comply with International Financial Reporting Standards since 1984 which assures standardization of our data.

3.2.2 Data sample

Panel data on Pakistani firms is available for the previous nine years ranging 2002–2010 in OSIRIS database. It was deemed necessary to select a long period in order to draw sound statistical estimations for the relationships to be tested in this research. The study begins with 2002 owing to the fact that this is when the first election was held and the government was established. Therefore, this study uses panel data that contains information for a nine-year period, and combines this particular cross-section with the time-series. It is argued that panel data, having blending characteristics of both cross-sectional and time-series data, improves the overall efficiency of econometric estimates through offering a greater degree of freedom and less collinearity amongst variables (Hsiao, 1985). Accordingly, each firm in the study sample does not contain the same number of time-series observations, and so this dataset is an unbalanced panel data.

The sample includes non-financial listed firms from Pakistan for the period 2002–2010. The decision to restrict the sample only to non-financial firms (with SIC less than 6,000) is due to the accounting treatment of revenue and profits for financial firms (banks, insurance and investment firms) being significantly different to in the case of non-financial firms. Rajan & Zingales (1995) argue that the leverage of financial firms is significantly influenced by explicit (or implicit) investor insurance schemes, such as deposit insurance. In addition, the capital structure of such firms is influenced heavily by regulatory requirements; therefore, it is not appropriate to compare the financing policies of such firms with non-financial firms. Moreover, it is necessary for each firm to report a minimum two-consecutive years' information in order to assess the changes in the financing structure of the firm.

Firm-level information in the OSIRIS database is available for 419 non-financial listed Pakistani firms. Following the application of the aforementioned selection criteria, an unbalanced panel of 2,199 firm-year observations on 380 firms was remaining for the empirical analysis. In order to identify the group affiliation of the sample, the reported list of top-30 business groups and their associated firms (published by Rehman, 2006) was used. In fact, this book identifies the 38 top business groups in Pakistan. Amongst those, eight business houses comprised only non-listed and/or financial firms; therefore, the remaining 30 business groups are considered. By matching the list of 30 business group-affiliated firms with the sample, 105 firms are identified as business group-affiliated, whilst 275 firms are considered as not affiliated to any business group.

In order to garner the information about the firm's political connection, firstly, data on all politicians needs to be gathered. For this purpose, this research relies on the Election Commission of Pakistan (ECP). ECP provides information on all individuals who have participated in previous elections—at both national and state level. Given that the sample period covers 2002–2010, there are two relevant national and state elections for this study: general elections held in 2002 and those held in 2008. This politician dataset includes all the information on the names and party affiliations for all candidates in the elections, including the winner, party affiliation, and the number of votes each received. Each politician is identified uniquely through a combination of first and last name. There were around 210 national and 460 state constituencies in each election, with 6–9 candidates per constituency and a total of over 8,800 candidates in both election years. Following Khwaja & Mian (2005) and Faccio (2006), irrespective of the electoral outcome, all politicians are considered influential individuals who can benefit firms through preferential access to finance.

3.3 Corporate political connections

Political connections are not directly observable as it is not possible to establish whether or not a firm has political ties and/or whether a bank has granted a loan on easy terms. Furthermore, if political connectedness is not reported publicly, it must be inferred by considering a firm's major shareholders and by examining the composition of its Board and management. As Fisman (2001: 1059) suggests, 'in countries where political decision-making is decentralized, simply defining political connectedness is an extremely complicated proposition'. He further explains that knowing the political link of any firm in developing countries requires information in terms of its relationships with several government decision-making bodies and some mechanism associated with cumulating these connections. Obtaining precise data would be complicated in such economies as a business-politics relationship is often a taboo subject of conversation, and connections are likely to shift noticeably over time. Identifying a firm as politically connected is cumbersome in a developing country like Pakistan, with Fisman (2001) suggesting that the business-politics relationship in developing countries is commonly a proscribed subject of conversation, with connections likely to shift noticeably over time. Therefore, researchers have adopted mainly three approaches whilst seeking to identify firms as being politically connected.

In the first approach, there are studies that have employed subjective measures to identify the corporate political connections: for instance, in an attempt to measure the political connections amongst Indonesian firms, Fisman (2001) uses Suharto Dependency Index, developed by the Castle Group. Castle Group is a leading economic consulting company in Indonesia, offering the services of strategic partner search. Amongst their main popular products is a 'Roadmap of Indonesian Business Groups' (1998), which outlines the

relationship amongst the leading groups¹⁴ along with information centred on their holdings and government connections. It includes an index of numerical rating (1 to 5) concerning the extent to which each of the top 25 largest industrial groups is dependent on political connections for its profitability. Fisman takes this measure so as to identify corporate political connection. In the context of this study, there is a large economic consulting service (export.gov)¹⁵ available for foreign firms to identify a potential local trade partner in Pakistan. Although their services include useful information on Pakistani firms regarding their business activities, financial conditions, credit-worthiness, and trading experience, information on corporate political connections is unavailable.

In the second widely used approach, studies such as those of Jayachandran (2006), Roberts (1990) and Kroszner & Stratmann (1998) identify political ties through political donations. In the US, for example, Federal Election Commission (FEC) requires political parties to unveil soft money contributions, with such data publicly available from the FEC. However, public information on such donations is made available in only a few countries (mainly the US). Therefore, in this study, this particular method—which is centred on identifying political donations—is not applicable owing to such information not being available publicly in Pakistan.

Following the third approach, political economics literature matches two separate databases to identify the corporate political connections. In so doing, the names of politicians from the first database containing the politician's information are used to cross-check the top directors

¹⁴ Most of these groups have multiple companies listed on the Jakarta Stock Exchange, yielding a total sample of 79 firms.

¹⁵ Export.gov brings together resources from around the globe to assist US companies in planning their international sales strategies. Their services also provide information on Pakistani firms to facilitate US companies to find the strategic partner. <http://export.gov/index.asp>

of companies from the second dataset (containing firm level information). If a politician's name is matched to a firm director's name, that firm is considered politically connected.

In the same spirit, in an influential cross-country study, Faccio (2006) defines a firm as politically connected in three ways: firstly, if one of the firm's large shareholder is either a member of parliament; secondly, large shareholders have links with a minister or head of state; and thirdly, large shareholders are closely related to top officials. The term 'large shareholders' is defined as anyone directly or indirectly owning at least 10% of shareholder votes. According to the second classification scheme, firms are recognised as being connected if any relative (spouse, child, sibling, or parent) of a politician (parliamentarian or minister or head of state) is a large shareholder. Connections of a third type occur when a politician is an ex-top executive, or if a large shareholder is a friend of a minister or a Member of Parliament. Information on Members of Parliament and the government is taken from the official website of each country's government and parliament, whilst the names of top shareholders are drawn from Worldscope. The essence of this measure is adopted in several other studies (Asquer & Calderoni, 2011; Goldman *et al.*, 2009; Leuz & Oberholzer-Gee, 2006; Ferguson & Voth 2008; Infante & Piazza, 2010; Khwaja & Mian, 2005). These studies generally identify a firm as being connected if any of the firm's Board members have taken part in any level of national election.

In this study, following mainstream literature (Khwaja & Mian, 2005; Faccio, 2006; Infante & Piazza, 2010) which is based on aforementioned third approach, a firm is defined as connected if it has a politician on its Board of Directors. A politician is defined as any individual who stood in the national or provincial election. Given that the sample period covers 2002–2010, there are two relevant national and state elections for this study: the

general election held in 2002 and those of 2008; thus, an individual who participated in the national or provincial election, held in 2002 and 2008, is considered as politician. Data on politicians (electoral candidates who participated in elections held in 2002 and 2008) is taken from Pakistan Election Commission. This politician's dataset includes all information on the names and party affiliations for all the candidates in these elections, including the winners, and the number of votes received by each. Each politician is uniquely identified by a combination of first and last name. Information regarding the firm's Board of Directors is taken from OSIRIS. Finally, the complete names of Board of Directors will be matched against each listed politician's name. If the full name of the director provides a precise match with the complete name of the politician, the firm is classified as a politically connected firm. Thus, corporate political connectedness in our study is time-invariant. This measure of political connection yields 107 firms as being politically connected. The size of non-connected firms in our sample is 273. Importantly, these 107 connected firms are found to maintain political connections for the entire sample period 2002-2010.

It is worth noting that our measure of political connection does not consider the connections that may have been established through relatives, friends, or similar educational intuitions, also termed as 'indirect connections'. Generally, indirect connections are retrieved through print media, and employed mainly in the studies on developed countries, such as Asquer & Calderoni (2011) and Sapienza (2004) in Italy, and Goldman *et al.* (2009) in the US. Because of institutional settings and strong political influences on both print and electronic media in Pakistan, it is difficult to have confidence in such sources. As International Media Support (2009) points out, in Pakistan, political affiliations, commercial interests, and hidden political agendas are commonly the motivations behind biased political information arising in mass

media. Accordingly, our sample is entirely based on direct personal political connections that are retrieved from the existing databases.

Table 3.1: Data sources and measures of political connections used in existing studies

Authors	Data source of political connections	Data source of firm specific variables /board members	Country	proxies
Asquer & Calderoni (2011)	CONSOB website, maintained by Government authority that oversees the security market, and collects the information on board members of public traded firms publishes such data on this website.	Bloomberg	Italy	<ul style="list-style-type: none"> • If one of firm's large shareholders is a member of parliament. • Large shareholders have links with a minister or head of state. • Large shareholders are closely related to top official.
Faccio (2006)	Official Web site of each country's government and parliament.	Worldscope	Cross-country	<ul style="list-style-type: none"> • If one of firm's board of director is a Member of Parliament. • Large shareholders have links with a minister or the head of state. • Large shareholders are closely related to the top official.
Faccio & Parsley (2006)	Mainly from www.rulers.org; and w.politicalgraveyard.com	DataStream Worldscope	Cross-country	<ul style="list-style-type: none"> • Firms are regarded as connected if their headquarters are located in the home town of the deceased politician (city where politician resided).
Ferguson & Voth (2008)	Self-explored	Official price lists published by Berlin Stock Exchange	Germany	<ul style="list-style-type: none"> • Membership of Nazi party or political donations
Fisman (2001)	Suharto Dependency Index, developed by the Castle group in a product "Roadmap of Indonesian Business	Financial Times' Extel Financials Database	Indonesia	<ul style="list-style-type: none"> • Suharto Dependency Index (scale 1-5), developed by the Castle group.

	Groups (1998)”			
Goldman <i>et al.</i> (2009)	Federal Election Commission (FEC)	Securities and Exchange Commission (SEC)	US	<ul style="list-style-type: none"> • A firm is defined as connected if any board member held a position in any time in past such as Senator, Member of Administration, Member of the House of Representatives. • Or has been a director of an organisation such as CIA, FEMA, or OMB.
Jayachandran (2006)	Federal Election Commission (FEC)	Centre for Research on Security Prices (CRSP)	US	<ul style="list-style-type: none"> • Political donations
Khwaja & Mian (2005)	Pakistan Election Commission (PEC)	Credit Information Bureau (CIB) database	Pakistan	<ul style="list-style-type: none"> • They count firm as connected if a firm has a politician on their board of directors. A politician is defined as any individual who stood in the national or provincial elections during the sample period.
Kroszner & Stratmann (1998)	Federal Election Commission (FEC)	Federal Election Commission (FEC)	US	<ul style="list-style-type: none"> • Political donations
Leuz & Oberholzer-Gee (2006)	Suharto Dependency Index, developed by the Castle group in a product “Roadmap of Indonesian Business Groups (1998)”	Financial Times' Extel Financials Database	Indonesia	<ul style="list-style-type: none"> • Suharto Dependency Index (scale 1-5), developed by the Castle group.
Li <i>et al.</i> (2009)	Survey, jointly conducted by All China Industry and Commerce Federation, the China Society of Private Economy, and the United Front Work Department	Survey, jointly conducted by All China Industry and Commerce Federation, the China Society of Private Economy, and the United Front Work Department	China	<ul style="list-style-type: none"> • Membership of Communist Party of China

Infante & Piazza (2010)	Ministry of the Interior's website & websites of Houses of the Italian Parliament	InfoCamere database	Italy	<ul style="list-style-type: none"> • If one of the firm shareholders is a Member of Parliament.
Roberts (1990)	Federal Election Commission (FEC)	COMPUSTAT	US	<ul style="list-style-type: none"> • Political donations

3.4 Industry classification

Every firm makes financial policy which is best fitted to its current situation and which minimises the cost of capital. Amongst other factors, the type of industry constitutes the external environment in which a firm operates. Owing to the fact that various industries experience different economic conditions, such situations may instigate discrepancies in the firm's financial policy. For example, a firm operating in a sector with volatile earnings would not rely on leverage, but would most likely pile-up the cash stock as a buffer against unforeseen contingencies (Balakrishnan & Fox, 1993).

Talberg *et al.* (2008) emphasise the distinctive features associated with different industries. They elucidate that the food industry, for example, is known as being more stable owing to the fact that food is a basic need, but simultaneously, it is considered a highly competitive sector. The construction industry is considered expensive in the initial stage of investment, and is further regarded as sensitive to general economic cycles. Investment level is commonly lower in the periods of economic downturn. The oil and gas sector is known as capital-intensive but with high operating margins. The telecoms industry is highly regulated, and faces a number of challenges in relation to technological development. Regulated firms have stable cash flows and lower expected costs of financial distress. Thus, regulated firms should have more debt; at the same time, however, managers have less discretion in regulated firms, which in turn reduces the severity of shareholder-manager conflicts, and makes debt less

desirable from a control perspective. Such characteristics are specific of each industry, and shape the financial policies of firms—depending on the industry in which the firm operates.

Industry effects reflect a set of correlated factors, which cause industry differences in the firm's financial policy and ultimately performance. Firms in an industry face common forces that affect their financing decisions. Such forces may be reflected in product market interactions or otherwise by the nature of competition. Moreover, these could also reflect industry heterogeneity in relation to the types of asset, business risk, technology, or regulation (Frank & Goyal, 2009). Empirical studies report significant variations in terms of the degree of leverage, investment efficiencies, and expected performance across industries (Lemmon *et al.*, 2008; Hovakimian *et al.*, 2001). Scott (1972) and Schwartz & Aronson (1967) observe persistent differences across industries and strong intra-industry similarities in firm leverage. According to Bradley *et al.* (1984), the intensity of R&D, investment, advertising expenditures, regulatory standards, and earning volatility helps in terms of explaining both inter- and intra-industry variations at a firm leverage level. Industries with more growth opportunities and greater information asymmetries tend to hold more cash. An obvious consideration is that firms in more profitable industries depend less on external funding than firms in less profitable industries owing to their higher level of profitability. Consequently, such firms use more internal-capital. Moreover, some industries, such as computer-related industries, may be subject to a lack of collateral precisely owing to the fact that production is less capital-intensive than in manufacturing industries. This attribute coerces them to stock more cash (Levine, 2002; Rajan & Zingales, 1995). Taken together, the industry factor is likely to play an important role in establishing leverage, investment expenditure, and ultimately the performance of a firm. Therefore, this study controls the industry differences in analyses.

Currently, there are three industry classifications in the world, namely Global Industry Classification Standard (GICS), Global Classification System (GCS), and Standard Industrial Classification (SIC) system. GICS is published by Morgan Stanley Capital International (MSCI) and Standard & Poor's (S&P), which includes 10 economic sectors, 23 industry groups, 59 industries, and 123 sub-industries. Markedly, GCS is published by Financial Times and London Stock Exchange (FTSE), which includes 10 economic groups, 39 industry sectors and 102 industry sub-sectors. SIC is published by the United States. The database OSIRIS allows the classification of a sample by either industry classification scheme. Since, the SIC is the most widely used classification for statistics of economic activities (Mannetje & Kromhout, 2003), Pakistani firms in this study are classified based on two-digit SIC (The three-digits SIC code indicates the sector group at relatively smaller level and the two-digits SIC code indicates the sector at broader level). Two-digit SIC distributes non-financial firms into 12 categories, which is too detailed for this study; thus, following Aharony *et al.* (2010) and Campbell (1996), the study re-classifies the two-digit SIC to a narrower eight-industry category. The following table (Table 3.2) shows the distribution of firms across industries.

Table 3.2: Sample distribution across industries

Industry	Two-digit SIC code	Number of firms	Percentage of entire sample
Food & Tobacco	1, 2, 9, 20, 21, 54	48	13
Basic industries including petroleum	10, 12, 13, 14, 24, 26, 28, 29, 33	67	18
Construction	15, 16, 17, 32, 52	58	15
Textiles & Trade	22, 23, 31, 51, 53, 56, 59	132	35
Consumer durables	25, 30, 36, 37, 39, 50, 55, 57 34, 35, 38	33	9
Transportation	40, 41, 42, 44, 45, 47	10	2
Services	72, 73 75, 76, 80, 82, 87, 89	11	3
Others	No specific SIC code	21	5
Entire sample		380	100

Table 3.2 shows that the textile sector has the highest percentage, representing 35% of the total sample. It is also worth noting that the first four industries—Food & Tobacco, Basic industries including petroleum, Construction and Textile sector—represent more than three quarters of the whole sample. Disparity in the concentration of corporate political connections across the industries and their impact on the degree of leverage, the operational efficiencies and ultimately on the performance is obvious, and would be controlled in analyses.

3.5 Business groups

The business group is an important firm ownership characteristic of private firms of most countries (Manos *et al.*, 2007). Such groups mostly comprise legally independent firms bound together in some formal and/or informal ways. Vigorous research work is being carried out, providing a range of reasons for the existence of this organisational form (Khanna & Palepu, 2000; Granovetter, 1994; Leff, 1976). In this regard, Granovetter (1995) broadly classifies the frequently reported motives of group formation into four main types: first, resource dependent firms are rarely self-sufficient, and thus may form alliance with other firms upon whom they regularly depend for resources; second, the need for strategic alliance amongst firms facing the changing nature of markets and consumer demand; third, the need for coalitions emerges when capitalist firms have to ally against others; and fourth, rent-seeking objectives from the government through capitulations.

Groups around the world vary considerably in form. In a cross-country study carried out by La Porta *et al.* (1999), firm ownership was examined, with firms reported as being typically controlled by families through pyramidal ownership structures or hierarchical chains of ownership relations. The consequential group of firms—controlled by a single family—is referred to as a ‘family business group’ by Almeida & Wolfenzon (2006). Other forms of business groups include collections of firms connected through a director interlocks, common main bank, common owners, direct/indirect equity holdings, or other non-family social ties (Manos *et al.*, 2000).

The existing work on business groups in the emerging markets view the formation of business groups as a response to market imperfections. This perspective was initially presented by Leff (1976), and subsequently adopted by Caves & Uekusa (1976), Khanna &

Palepu (2000), and Chang & Choi (1988). This stream of literature emphasises that capital market imperfection, such as information asymmetry, lack of adequate disclosure, undeveloped financial intermediaries, and weak contract enforcement institutions, together generate opportunistic behaviour amongst trading partners and increase the costs of transaction. In such an environment, ties can reduce transaction costs by facilitating information flow between firms or otherwise by aligning the interests of firms so that they strive collectively for mutual benefit (Khanna & Rivkin, 2006). Such groups may also use their broad scope to smooth out income flows, thereby ensuring access to internal capital in an environment in which external finance is costly and difficult to access. Using insights from the financial benefits associated with business group affiliation, it can be argued that the firms affiliated with a business group may have better access to internal and external capital than the non-affiliated firms.

Business group is, in fact, a very prevalent phenomenon, known in many countries under various names, such as the *keiretsu* in Japan, the *chaebol* in Korea, the *grupos economicos* in Latin America, the '*twenty-two families*' of Pakistan,¹⁶ and so on (Granovetter, 1995). The business groups in Pakistan—like many other business groups around the world—are a collection of legally independent business entities run by families operating in multiple industries. Each business group is associated with a particular family, with the family patriarch the dominant shareholder and manager, whereas immediate and distant family members assist in operating other firms within the business group (Ghani *et al.*, 2011). It is a common practice that family members of a group hold directorships in firms affiliated to the same group. In addition to interlocking directorship, various forms of financial tie, such as

¹⁶ White (1974) documented forty three of Pakistani family-run groups organised around state-sanctioned monopolies, and referred these groups as '*twenty-two families*'.

cross-holding of equity, debt guarantees and tunnelling of resources, are the main mechanisms through which firms in the groups are linked.

The origin of business groups in Pakistan dates back to the colonial times, when few families had begun to evolve at the start of the 18th Century following the loss of monopolistic power of English East India Company over trade. At this time, employees of the company who were well-equipped with administrative and technical knowledge began to operate as free traders. Later, they diversified their business activities and organised themselves into Agency Houses¹⁷ (Manos *et al.*, 2000). Following independence in 1947, these Agency Houses evolved into business houses. In the post-liberation period, the evolution of business houses could be categorised into three phases, beginning with the post-liberation period up to the separation of East Pakistan (1947–1971), Bhutto era (1971–1977), and post-Bhutto era till today (Rehman, 2006).

In the first phase, the government actively encouraged the development of basic domestic industry, and specially promoted the manufactured goods (primarily textile) instead of agriculture as the future strategy for economic development. Towards this end, government facilitated business families with extensive incentives in the form of tariffs, quotas, tax evasions and subsidies. Such financial benefits resulted in the development of a class of industrialists—subsequently known notoriously as the *twenty-two families*. The second phase is marked with industrial nationalization. Z.A. Bhutto's government undertook large-scale nationalisation of firms from industry, insurance, and the banking sector, most of which were

¹⁷ The role of Agency Houses was to set up a new business with their wealth or in partnership of an individual or a firm. Once the business flourished he would sell it off and enters a managing agency contract with the new owner and setup a new business (Manos *et al.*, 2007).

owned by members of the twenty-two families. By and large, it was generally perceived as an attempt to curb the growth of monopoly capital owned by such business groups¹⁸. The inevitable outcome of this wave of nationalisation was a flight of capital out of the country. The third era began following the fall of Z.A. Bhutto's regime. The economic policy of this period was characterised by greater reliance on private enterprise; therefore, nationalisation policies were reversed and industrial policies were framed to restore private sector confidence in government's decision not to nationalise. The massive privatisation of state-owned firms, coupled with the eradication of entry barriers in the product market, was observed during this same period (Moihuiddin, 2007). From the late 1980s, the government¹⁹ began to return some of the nationalised units back to these families. The government actively implemented industrial promotion policies of varying form, duration and degree. Gradually, the business environment became more suitable in relation to such business houses. During this period, new business families also emerged in the market and existing business groups increased the scope of their business activities and capitalised new opportunities offered by the deregulated market, this realising superior economic performance.

For over a decade, international attention has focused on corporate accountability and reporting standards, especially in family owned (group-affiliated) firms. Initially, firms voluntarily comply with non-binding corporate governance codes to achieve high standard of corporate governance; over time, however, persistent demand for corporate transparency led to evolution from a voluntary notion of corporate governance to one where firms were legally obliged to disclose their ownership (Ibrahim, 2006). Following the international trend, in

¹⁸ Z.A. Bhutto's regime nationalized as many as 31 key industries; 13 banks; 12 insurance companies; 10 shipping companies and two petroleum companies (Ghani *et al.*, 2011)

¹⁹ This political government was led by Nawaz Sharif, who himself an owner of a leading business house.

Pakistan, the SECP (Securities and Exchange Commission of Pakistan) introduced the Code of Corporate Governance (CCG) in March of 2002, and subsequently enforced the code through listing regulations of all three stock exchanges of the country. According to this code, all of the listed firms have to disclose ownership of their shareholders owning 10% or more of the voting capital and the annual reports for major shareholders. However, the practice of this code is not prevalent, particularly amongst firms affiliated to business groups (Javid & Iqbal, 2010). The rationale for non-compliance with CCG can be attributed to the fact that the boards of group affiliated firms in Pakistan are generally dominated by executive and non-executive members of a controlling family, which seeks to maintain managerial (voting) control by owning the majority of the stock or otherwise by cross-shareholdings whilst owning even a small fraction of ownership. Their hierarchical ownership structures within the groups make it difficult for outsiders to track the actual business ownership of individual firms. As a result, Pakistani firms affiliated with business groups have lower transparency and weaker corporate governance mechanism (Gani & Ashraf, 2005). Considering this scenario, in this study, it is not possible to define a firm as group-affiliated on the basis of the percentage of ownership.

Alternatively, in an attempt to identify the group affiliation of the sample, this research relies on the book by Rehman (2006), which reports the list of the top 38 business groups (based on their sizes) and their associated firms in the Pakistani market. This is the updated edition of the book that focuses on the 38 top business groups in Pakistan. Amongst those, 8 business houses only comprise of non-listed and/or financial firms, and thus we could match our sample set only to the remaining 30 business group-affiliated firms. The similar source is also used in several other studies, such as those of Masulis *et al.* (2011), Ashraf & Ghani (2005), and Candland (2007). In addition, official websites of these business groups, mentioning the

names of affiliated firms, were also cross-checked. This classification yields 105 group-affiliated firms and 275 firms as non-affiliated.

3.6 Financial disclosure practices in Pakistan

There are three accounting bodies operating in Pakistan, namely Institute of Chartered Accountants of Pakistan (ICAP), Institute of Cost and Management Accountant of Pakistan (ICMA) and Pakistan Institute of Public Finance Accountant (PIPFA)²⁰. After gaining independence in 1947, Pakistan kept the Companies Act of 1913 as the system of financial reporting until 1971. Due to the rudimentary nature of this act, the government created a semi-autonomous body (Security and Exchange Authority, SEA) in 1970 to improve the existing disclosure requirements. For the first time, the publication of bi-annual financial statements for listed firms was made mandatory on the recommendations of SEA. By this time, since Pakistan had no country-level accounting standard of its own, ICAP encouraged its members to recommend that their corporate clients prepare their accounts in conformity with international accounting standards. Subsequently, Companies Ordinance 1984 was enacted in 1984. According to its Section 234, it was mandatory for listed firms to comply with International Accounting Standards (IAS); nonetheless, unlisted firms remained exempt from compliance with IAS (currently known as International Financial Reporting Standards, IFRS).

The two aspects of financial disclosure in Companies Ordinance 1984 were critical, and are pertinent to our study: first, the disclosures of the control hierarchy, remuneration of directors, chief executive officers, and auditors are required from companies; second, in

²⁰ This section is mainly based on the exploratory study of Ashraf & Ghani (2005).

financial reports management were required to disclose various data, namely earning per share, any changes known to have occurred during the reporting year concerning the nature of the business, and information relating to defaults on payments of leverage (if any).

The next significant improvement in the financial reporting system is the introduction of Code of Corporate Governance in 2002. The main intention of this code is to boost the confidence of investors in the capital market through the mitigation of moral hazard problems. This initiative encouraged firms to disclose previously concealed information concerning their credit worthiness, such as loan defaults, tax evasions, and the non-payment of dividends to shareholders for a longer period of time. The code calls on listed firms to publish un-audited financial statements quarterly; earlier, it was semi-annually. All listed firms were required to include in the annual report a statement of compliance with the best practices of corporate governance. A brief description of evolution of the institutional structure of financial disclosure is presented in Table 3.3.

Table 3.3: Evolution of institutional structure of financial disclosure in Pakistan

Year	Standards adoption
1984	Companies Ordinance 1984
1986	IAS 1,2,7-14
1996	IAS 23-25
1997	IAS 31,32
1998	IAS 26-28
2000	IAS 30, 34, 35, 37, 38
2002	Corporate Code of Governance

Although the accounting practices in Pakistan are based mainly on IFRS, one additional sub-standard, Islamic Financial Accounting Standards (IFAS), is nevertheless operational, which is known to relate to Islamic financial system. IFAS concerns the Islamic modes of financing, which provides guidelines to relevant firms in terms of preparing financial statements. More specifically, IFAS-1 concerns the instalment sale under Islamic principles, termed as ‘Murabah’, whilst IFAS-2 relates to lease transactions under Islamic rules, termed as ‘Ijarah’. However, IFAS are pertinent only to Islamic financial institutions that are not included in the current study; therefore, focus can be directed towards other practicing standards.

Earlier studies argue that the effective implementation of reporting standards ultimately depends on institutional stability (Meek & Saudagaran, 1990; Gernon & Meek, 2001). Much the same as many other developing countries, Pakistan has a rather weak creditor protection mechanism, and company law is regarded as least administrative law (Ashraf & Gani, 2005). Consequently, the expropriation of minority shareholders and creditors is extensive. Moreover, as discussed earlier, family control is a common feature of the Pakistani capital market. The informal hierarchies amongst family firms contradict the formal structural of management and governance. Given the complexity of organisational structure within family-controlled firms, it is difficult to identify and deal with related party transactions²¹. A recent survey of UNCTAD (2009)—which examines the disclosure practices of firms listed on the Karachi Stock Exchange in Pakistan—shows that financial transparency (financial and operating outcomes) is the most prevalent feature of disclosure; however, disclosure regulations regarding the Board members (Board structure, control rights, role of the Board

²¹ Related party transaction takes place when the groups in the deal have a prior relationship. The Amendment to IFRS 8 deals the related party disclosure (Baker and Anderson, 2010).

of Directors, information on outside directors) are not followed entirely²². Largely, this survey depicts that many firms are not, at present, in compliance with the disclosure regulations.

Finally, in accordance with the views of Ashraf & Ghani (2005), we may conclude that the implementation of a financial reporting system may only be possible in the presence of better legal rules, and with the stability of regulatory institutions. The judicial inefficiencies, lack of investor protection, and weak enforcement mechanisms are essential aspects explaining the low quality of financial disclosure within the Pakistani capital market.

²² This study is conducted by UNCTAD in corporation with the Institute of Chartered Accountants of Pakistan.

CHAPTER 4: LEVERAGE AND POLITICAL CONNECTIONS: FIRM-LEVEL

EVIDENCE FROM PAKISTAN

4.1 Introduction

The intricate nexus between the financial institutions and business world has long been acknowledged; however, the East Asian financial turmoil of 1997–1998 brought into sharp focus the distinction between the relationship-based financial system prevalent in many developing countries, as well as the arm's-length market-driven system that characterises developed economies (Charumilind *et al.*, 2006). Although political connection is pertinent to both financial systems, it is widely argued that the prevalence of the political connection is considerably higher in developing countries based on a relationship-based financial system. The recent studies (Xu *et al.*, 2011; Li *et al.*, 2009; Claessens *et al.*, 2008) carried out on contracting in the context of the developing countries find that firms' reliance on political connection is stemmed by a response to the inadequacies in formal institutions that makes arm's-length financing impracticable.

There are a growing number of recent studies focused on the implications of political connections that document the various economic benefits as the outcomes of these connections (Faccio, 2006; Infante & Piazza, 2010; Cooper *et al.*, 2010)²³. Such studies acknowledge the potential link between the political patronage and a firm's leverage. Although prior empirical work provides some degree of insight into the relationship between financing decisions and the political connections, however, such evidences are mainly based

²³ Though these studies provide several positive outcomes of political connections, i.e. bailout, privileges in formal policies, informal grants but we focus on access to finance as a channel through which political connections pay off.

on the relatively ‘clean’ US system (Houston *et al.*, 2012; Jayachandran, 2006; Roberts, 1990; Kroszner & Stratmann 1998). Empirical evidence from developing economies may provide additional insights into the corporate connection-finance nexus.

In this chapter, this line of inquiry is pursued further through examining the way in which corporate political connections determine access to finance in a developing economy—that of Pakistan. Moreover, we argue that the Pakistani setting may be of interest for several different reasons. First, Pakistan is known for its execrable relations between politicians and firms, as has been confirmed by Khwaja & Mian (2005). During the past fifteen years, three elected governments were dissolved on identical accusations of maladministration, corruption, and political patronage, which reflects the widespread extent of political corruption within the economy. Second, considering the limited level of financial institutional development, the state-ownership of banks and the weak democratic institutions, the value of political connections is likely to be greater than that of other developing countries. Most of this value stems from preferential access to credit from government banks owing to the fact that their decision-making commonly reflects the policies dictated by the government. Third, Pakistan has a higher percentage of politically connected firms, and there are no legal restrictions to such connections (Rehman, 2006). Such features of the Pakistani economy provide a better prospect for testing at an individual firm level in order to ascertain whether or not the firm’s political connections help in preferential lending.

This chapter addresses three fundamental political economy questions. First, do the firms with political connections have easier access to leverage than those without such ties? In other words, it may be implied that firms with political connections comprise more leverage than their non-connected peers. Second, does privileged access to finance (if any) vary

according to the strength of the connected politician? Third, are the standard firm-specific determinants of leverage that are known to be associated with corporate financing decision also significant for politically connected firms in terms of accessing debt.

The aforementioned questions are tested empirically with Pakistani firm-level data. The nature of data employed provides two main advantages: firstly, a direct measure of political connections is used as opposed to the subjective measures, which are typically based on the subjective assessment of certain individuals, and which are reported in survey data or ‘expert reports’²⁴; and secondly, the unobserved heterogeneity is mitigated across an extended nine-year sample period by employing a panel dataset with time-fixed effects²⁵ to exploit the variation over years in our estimation.

The results show a positive and significant link between political connections and leverage. The connected firms—defined as if its director participates in an election—are more levered than non-connected firms, accordingly supporting the political lending conjecture in the Pakistani credit market. Once the leverage measure is split based on debt maturity, the positive effect of connections remain only for long-term loans, whilst the firm’s political connections do not have any effect on short-term finance. The results remain significant following the controlling of the firm’s characteristics. The achieved results are robust to potential endogeneity issues, alternative estimation techniques and across government periods. Furthermore, we find that having connections with a winning politician or a politician affiliated with the winning parties (coalition) has a larger impact on the firm’s total

²⁴ Subjective measures, mostly rely on numerical rating index, are widely employed to determine corporate political connections in related empirical studies i.e. Fisman (2001); and Leuz and Oberholzer-Gee (2006).

²⁵ It is worth mentioning that firm fixed-effects are not utilized in the analysis. The underlying reason is the small variation across firms’ characteristics and importantly since we are using industry fixed-effects which, to some extent, absorb firm-level differences such as profitability, size of physical assets and growth opportunities.

and long-term leverage, thereby implying that the benefits associated with the political connections ultimately rest on electoral outcomes.

Finally, in relation to the role of firm-specific characteristics in the financing decisions of connected firms, we find the limited support for the importance of these determinants in explaining access to leverage. More specifically, firm size and business group affiliation have increasing effects on the borrowing capabilities of connected firms. In contrast, connections underplay the significance of collateral. Those firms with ties with politicians require much less collateral to borrow than those without connections. Finally, the remaining standard firm characteristics that are widely used as determinants of leverage—namely profitability, growth opportunities, and foreign ownership—do not seem to play an important role in the financing decisions of connected firms.

This study contributes to literature in two main ways. First, this study extends the research on the effects of political connections (e.g. Braggion & Moore, 2011; Ferguson & Voth, 2008; Faccio, 2006; Boubakri *et al.*, 2008) by providing convincing evidence that the political connectedness helps in accessing external finance. Moreover, we take a step further and conduct a series of tests in an attempt to highlight that such results vary across the strength of politicians and firm-specific characteristics. Second, our findings add to the corporate investment literature by emphasising the importance of political connectedness in the context of corporate financing decisions. Present studies are based primarily on standard corporate finance theories, such as Trade-off theory, Pecking order theory and Agency cost theory

(Marsh, 1982; Graham, 2000; Jalilvand & Harris, 1984; Harrison *et al.*, 2004)²⁶. However, we find that political forces play a significant role in the financing decisions of the firms; thus, the political aspect needs to be included in theoretical consideration whilst simultaneously examining corporate financing decisions.

The remainder of this chapter is structured as follows: Section 4.2 describes the relationship between politics and business in Pakistan; in Section 4.3, there is a brief review of some of the relevant theories, which lays the foundation for building the hypotheses of the study; Section 4.4 describes the data and summary statistics; Section 4.5 explains the empirical methodology; the main empirical results are reported and discussed in Section 4.6; and finally, Section 4.6 concludes the chapter.

4.2 Business-politics nexus in Pakistan

Politics in Pakistan has been linked with clientelism, rent-seeking, and corruption; this is evident from the Index of Economic Freedom co-published by The Heritage Foundation and the Wall Street Journal. The index consistently ranked Pakistan as being one of the most corrupt countries in the world.²⁷ During the past decade and a half, three elected prime ministers and their respective assemblies have been dissolved on identical charges of corruption and political patronage. Such facts illustrate a phenomenon which has passed through the Pakistani economy during recent years.

²⁶ The origin of Trade-off theory traces back to the famous propositions of Modigliani and Miller (1958). Pecking order theory was first set out by Myers and Majluf (1984) and Agency cost theory initially proposed by Jensen and Meckling (1976).

²⁷ Recently, in year 2009, Pakistan is ranked 139th out of the 180 countries featured in the index. More details are available at <http://www.heritage.org/index/freedom-from-corruption>

Since the establishment of Pakistan, business has been overlapping the political arena. Yusuf Haroon, a leading industrialist, was the first Chief Minister of Sindh province, and persons such as Ahmad Dawood (founding owner of Dawood group), Naseer A Sheikh (founding owner of Colony group), and Rafiq Saigol (founding owner of Saigol group) held important official posts in the ruling parties and the governments (Rehman, 2006)²⁸. During this particular era, approximately half of the total private firms were controlled by five small ‘communities’ of traditional traders, all of whom were also involved in national or state level politics (Maniruzzaman, 1966).

The leading political parties that participated in the general elections in 2002 and 2008 were led by politicians representing some of the industrial elite in the country²⁹. The coalition governments of Prime Minister Shaukat Aziz in 2002 and Prime Minister Yousaf R. Gilani in 2008 comprised political parties with different policies and ideologies. The majority of the cabinet members were drawn from large business conglomerates; they were from families that owned big businesses, such as the Saifullah Group (of Anwar Saifullah, Federal Minister during 2002–2007), Zardari Group (of Asif A. Zardari, current president), Chauhadry Group (of Pervez Elahi, Chief Minister of Punjab during 2002–2007), Service Industries (of Ahmad Mukhtar, current water and power management), Ittefaq Foundries (of Sharif family, current Chief Minister of Punjab), Kohistan Transport (of Shahid Nazir, member of national assembly during 2002–2007), and Riaz Bottlers (of Humayun Akhtar Khan, Minister for Trade and Commerce during 2002–2007). In an environment with politicians holding business interests, it is difficult to sustain a distinction between ‘business interests’ and

²⁸ Over the time these groups have diversified enormously and become more large and visible. Currently, Dawood group comprises of 30 companies, Colony group controls 11 firms, and Saigol group operates 61 companies.

²⁹ Given the duration of our sample period, 2002 to 2010, there are two general elections held in 2002 and 2008 are pertinent to this study.

‘interests of the state’. Thus, it is argued that several politicians systematically misappropriate resources on a grand scale through the abuse of allocated role of the state.

Desai & Olofsgard (2011) illustrates that, unlike in developed countries, where cronyism takes the form of privileges enshrined in formal policies, discriminatory enforcement of formal rules, and informal grants, political favours in developing countries typically adopt the form of preferential credit to particular firms (Khwaja and Mian, 2005; Li *et al.*, 2009; Claessens *et al.*, 2008), tax evasion (Adhikari *et al.*, 2006; Faccio, 2006) and utility bill exemptions (Desai & Olofsgard, 2011). Khwaja & Mian (2005) affirm this by showing that the predominant means of obtaining political rent in Pakistan is through bank loans. They further report that state banks allow for greater extraction of rents by the politician for three key reasons: first, loan decisions in state banks are directly influenced by politicians; second, they are simply the more dominant domestic players within the banking sector, and, although the proportion of private banks has been on the increase since the instigation of financial reforms in 1991, the public sector has remained a leading lender; and third, soft budget constraints lower the cost of capital for government banks, with the strong support received from the government allowing them to remain solvent, despite the higher level of default rate on its loans. Moreover, owing to their organisational structure, the lending decisions of governmental banks are more prone to being influenced by the politicians. With this noted, the top management is appointed by the government, which is charged with devising the policies of the bank, and lending decisions of large credit. Therefore, bank management acts in ways that are in line with politicians’ interests, and which ultimately benefit their affiliated firm.

The politicians in Pakistan have remained powerful enough to enrich themselves and their firms through borrowing from banks and defaulting on loans. It is evident from the State Bank of Pakistan on political lending that ‘total advances made by the bank in 1990 were estimated at Rs 230 billion... (and) only 1200 persons received loans of Rs 10 million and above against their firms, with a 48% stake of the entire cake, by receiving Rs 110 billion in loan’³⁰. This quote suggests that approximately half of the credit—mainly from governmental banks—reaches firms with political connections. Based on this discussion, this relationship between businesses and politics is tested empirically in the following sections.

4.3 Theoretical foundations and hypotheses development

In their landmark paper in 1958, Modigliani & Miller (MM) argue that, in a world of perfect markets—a world without taxes, symmetric information, no agency conflicts, etc.—the extent of leverage in the capital structure of a firm would not affect a firm’s value. The perfect capital market has attracted a wide variety of research that relaxes the assumptions underlying MM’s irrelevance proposition. Researchers continue to add elements of the real world in quest of how earlier MM’s theoretical predictions change accordingly. This has resulted in a number of theoretical frameworks, all of which have their antecedents that seek to explain the corporate debt utilisation. Three theories—Trade-off theory, Pecking order theory, and Agency theory—are viewed as forming the building blocks for this study³¹.

According to Trade-off theory, each firm maintains a target debt–equity ratio that stems from the trade-off between the benefits of tax deductibility of interest payments and the higher bankruptcy risk from debt (Kraus & Litzenberger, 1973; Kim, 1978). In contrast, Pecking-

³⁰ Also mentioned in Rehman (2006).

³¹ These theories are discussed in detail in Chapter 2, section 2.4.

order theory (Myers & Majluf, 1984) is based on asymmetric information that exists between the management of a firm (insiders) and its investors (outsiders). It predicts a preference ranking over financing sources—internal financing first, external debt second—with external equity financing a last resort. Finally, Agency theory (Jensen & Meckling, 1976) concerns the relationship between principal shareholders (principal) and managers (agent). The fiduciary duty of managers is centred on maximising the wealth of shareholders. Agency theory predicts that, since the owners cannot perfectly and costlessly monitor the actions and information of managers, managers may therefore seek to maximise their own personal benefits as opposed to maximising the welfare of shareholders. Such managerial opportunism imposes agency costs to firm.

4.3.1 Access to Credit

As indicated, the Trade-off theory predicts that the optimal capital structure of a firm is determined by balancing the benefits of tax deductibility of interest payments against the deadweight bankruptcy costs emerging from higher debt. A large body of literature has shown that firm-specific characteristics encompass important implications for financing choice (Holmes & Kent, 1991; Watson & Wilson, 2002). Given that a firm's attributes shape the financing choice, the political connections—one of the most important aspects of the business world—may also influence financing decisions, and thus the prediction of Trade-off theory. More specifically, it can induce impacts in two main ways: firstly, as Manos *et al.* (2007) indicate, connected firms are able to reduce their expenses associated with tax liabilities by utilising their political connections; and secondly, connected firms are able to reduce bankruptcy cost by *ex ante* ensuring cheap credit and the *ex post* securing government bailouts. Having said, the Trade-off theory considers the cost of leverage as the cost of default—the cheap credit to connected firms indeed decreases the expected cost of financial

distress—thus influencing the debt–equity balance. Importantly, utilization of more credit facilitates connected firms in reducing the overall cost through paying less tax (tax shelter). Following the given arguments of tax deductibility benefits and reduced cost of financial distress to connected firms, it is expected that a greater use of leverage be observed amongst connected firms.

Pecking order theory—which notably suggests a preference of internal capital over external finance (Myers & Majluf 1984; Narayanan, 1988) and leverage—is regarded as a second choice owing to the fact that it involves costs to secure it; however, the easy assessable credit to connected firms entices managers to make use of higher leverage that contradicts the suggestion of the Pecking order theory.

A large body of empirical work has documented that firms with political connections enjoy exceptional access to government loans, and are in turn more likely to employ excessive leverage in financing decision (Faccio, 2006; Desai & Olofsgard, 2011; Fan *et al.*, 2008, 2007; Ye *et al.*, 2012; Fisman, 2001)³². This view predicts a positive relationship between a firm’s political connections and the degree of financial leverage. Nevertheless, there are studies depicting the inverse, or a complete lack of relationship between political connections and leverage (Bunkanwanicha & Wiwattanakantang, 2009; Asquer & Calderoni, 2011). In light of such diverse findings, it is still too difficult to draw a definitive conclusion regarding the impact of connections on a firm’s leverage. Regardless, however, following the widely held empirical conclusion and with consideration towards the low costs of financial distress for politically connected firms, it can be implied that, *ceteris paribus*, firms with political

³² Detailed literature review of these studies is provided in the chapter 2, section 2.4.

connections enjoy favourable treatment and thus maintain a higher degree of leverage than non-connected firms.

Extensive anecdotal evidence indicates that influential firms maintain banks as offshoots of their businesses. Thereby, Pakistani private banks, in general, and government banks, in particular, appear to lend and extend loans based on personal ties rather than on the basis of collateral and future cash flow. For example, The News, a Pakistani newspaper, reported how, during 2002-2007, National bank and United bank of Pakistan allotted loans worth Rs. 120 million to the Chauhadry Group against their textile and sugar mills, on preferential terms which were later written off. Similarly, the National Accountability Bureau (NAB), set up in 2000 with the aim to prosecute those involved in large-scale corruption, reported that during 2002-2007, a sum of Rs. 54 billion was credited on the basis of political influence without inquiring the creditworthiness of the firms. These instances indicate that firm's political connections are more important than traditionally known determinants of leverage to access debt in the capital market. Formally, this may be stated as follows:

Hypothesis 1: Politically connected firms have a higher degree of leverage than non-connected firms.

4.3.2 Winning Impact

The literature consistently reports that connected firms benefit more when they are connected to the winning candidate or when the candidate belongs to the winning (ruling) party³³ (i.e. Infante & Piazza, 2010; Asquer & Calderoni, 2011). Winning or being a member of a winning

³³ Winning (ruling) party implies that party is a part of coalition government, since as outcomes of both elections 2002 and 2008 coalition governments were formed.

party (or ruling coalition) ultimately increases the political strength of a politician in obtaining even greater preferential access to credit from banks, and thus benefit its connected firm; therefore, in essence, the question focuses on whether or not the level of financial borrowing of politically connected firms increases when its politician or political party wins the election.

Hypothesis 2: The level of leverage is greater for firms connected to a politician who wins or belongs to a winning party (or ruling coalition).

4.3.3 Sub-hypotheses

Theoretical and empirical studies have shown that size, collateral, profitability, growth opportunities, and ownership structure; and so on affect access to leverage³⁴. We develop further hypotheses regarding these firm-specific variables in context of political lending.

4.3.3.1 Firm Size

There are several theoretical reasons to believe that firm size affects leverage: for instance, firstly, unlike small firms, larger firms may find it relatively less costly to resolve information asymmetries with lenders; size may act as a proxy for the information that outside investors hold. As Fama & Jensen (1983) and Rajan & Zingales (1995) argue, larger firms tend to provide more information to outside lenders than smaller ones; therefore, larger firms are offered more capital or are otherwise offered capital at lower costs than smaller firms. Secondly, larger firms have higher external financing owing to lower bankruptcy costs and

³⁴ Harris & Raviv (1990) provide a comprehensive literature review of related studies discussing the determinants of a firm's access to leverage.

operating risk; therefore, firm size may be an inverse proxy for the likelihood of bankruptcy (Frank & Goyal, 2009). Fama & Jensen (1983) argue that larger firms tend to be more diversified, and are therefore less prone to bankruptcy. If operating risk and bankruptcy costs inversely relate to firm size, this should predispose smaller firms to use relatively less external finance (Harris & Raviv, 1990). Both arguments notably espouse the Trade-off theory, and suggest that size should be positively related with leverage. However, in contrast, the Pecking order theory predicts the negative relation by arguing that, since larger firms tend to possess lower information asymmetry, they are therefore more able to issue informationally sensitive securities, such as equity, and thus should have less debt.

Politically connected firms replace the significance of firm size with connections as a guarantee for stability, and thus limit the role of firm size as a determinant of leverage. Faccio *et al.* (2006) showed that government bailouts amongst politically connected firms may reduce the risk of default even in small firms. Similarly, Hoshi *et al.* (1990) report that firms with connections to a bank may face lower costs of financial distress, which underplays the significance of size in this respect. In a recent study, Poyry & Maury (2010) find the negative relation between firm size and the level of debt amongst connected firms. However, contrarily, Fraser *et al.* (2006) find a positive and significant relationship between the size of politically connected firms with leverage, and further observe more debt usage in large connected firms. With this noted, owing to the inconclusive impact of political connections on firm size as a determinant of access to leverage, it is difficult to predict the direction of relationship. Nevertheless, following a former strand of literature, the hypothesis for this study can predict a negative relationship for politically connected firms.

Hypothesis 3a: Firm size is less important to politically connected firms in specific regard to debt financing.

A negative and significant coefficient on this variable would indicate the lower importance of size for debt financing in the connected firms. On the other hand, a positive and significant coefficient would indicate that leverage, as an increasing effect of political patronage, is stronger for larger firms.

4.3.3.2 Collateral

The availability of firm's tangible assets may influence the firm's overall access to leverage. Tangible assets send a positive signal to the lender since fixed assets constitute favourable collateral for debt as in the case of default. Trade-off theory suggests that firms utilise physical assets as collateral so as to provide lenders with security in the event of financial distress. Pecking order theory also predicts a positive relation between collateral and leverage, and further asserts that physical assets, as collateral, reduce information asymmetry between the firm and lender. Harris & Raviv (1990) and Titman & Wessels (1988) state that tangibility might be a major factor in determining the firm's debt level. Most empirical studies (e.g. Rajan & Zingales, 1995; Marsh, 1982; Walsh & Ryan, 1997) conclude that those firms with a high level of tangible assets have a higher level of debt. On the other hand, however, Chittenden *et al.* (1996) find tangibility to be positively associated only with long-term debt, whilst a negative correlation can be seen when considering short-term debt.

The role of asset tangibility in terms of accessing credit is more vital in market-oriented systems than bank-oriented ones (Rajan & Zingales, 1995). Berger & Udell (1995) report that

firms with close links to lenders may require less physical collateral than those lacking such relationships. Whilst extending this view, Poyry & Maury (2010) and Charumilind *et al.* (2006) argue that firms utilise political connection as a substitute of tangible assets, and report the negative relation between level of debt and the size of physical collateral. In contrast, Fraser *et al.* (2006) report that the collateral value of a firm's fixed assets remains important in terms of accessing debt—even when having political connections. In particular, they argue that connected firms with larger fixed assets—which can be collateralised—are in a stronger position to extract additional debt than mere firms with political patronage. Once again, such empirical evidence is inconclusive; however, despite such contradictory evidence, the weight of available empirical evidence for the impact of political connections finds asset tangibility to be negatively correlated with debt. A testable hypothesis for the tangibility of assets may be that detailed below:

Hypothesis 3b: Tangible assets are less important to politically connected firms in debt financing.

A negative and significant coefficient on this variable would indicate the lesser significance of collateral for politically connected firms to access debt. On the other hand, a positive and significant coefficient would indicate that leverage, as increasing the effect of political patronage, is stronger for firms with large tangible assets.

4.3.3.3 Profitability

Although much theoretical work has been carried out since that of MM (1958), no consistent theoretical prediction has been established thus far for the relationship between profitability

and leverage. Nevertheless, the negative relationship predicted by Pecking order theory dominates the debate concerning the impact of profitability on capital structure. Following the Pecking order prediction, profitable firms should use more retained earnings and tend to have less leverage owing to their ability to generate sufficient cash. On the other hand, tax-based theories suggest that profitable firms should borrow more, *ceteris paribus*, as they are stronger to face financial distress and bankruptcy costs. The empirical findings also show mixed results. Studies such as those by Titman & Wessels (1998), Booth *et al.* (2001), and Wald (1999) report a negative relation between profitability and leverage. In contrast, Long & Maltz (1985) highlight a positive effect of profitability on leverage.

For the politically connected firms, Fraser *et al.* (2006) observes that political patronage increases a firm's leverage if the firm is profitable. Moreover, they also observe a positive relationship between profitability and leverage for politically connected firms, mainly because of their ability to engage in political activity. Following this prediction, we can hypothesise the following:

Hypothesis 3c: Firm profitability is more important to politically connected firms in debt financing.

4.3.3.4 Growth opportunities

Generally, theoretical studies predict the negative relationship between growth opportunities and the leverage. According to Jung *et al.* (1996) firms pursuing growth objectives bring together the interests of management and shareholders with strong investment opportunities, although shareholders of firms lacking investment opportunities tend to utilise debt as a

device for limiting the agency costs associated with managerial discretion. The growth opportunity is positively related to the level of the asymmetric information problem firms face when trying to acquire leverage. Myers (1984) suggests that fast-growing firms tend to utilise less leverage owing to having fewer tangible assets, and thus, growth opportunities cannot be collateralised. He adds that highly levered firms normally pass up profitable investment opportunities owing to agency problems. The Trade-off theory further argues that since growth opportunities are capital assets that add value to the firm but which cannot be collateralised, therefore firms holding future growth opportunities tend to borrow less. Accordingly, a negative association between leverage and growth opportunities is predicted. Earlier studies have found growth as being negatively related to long-term debt (Ozkan, 2001; Graham, 2000; Titman & Wessels, 1988), and positively related to short-term debt (Baskin, 1989; Titman & Wessels, 1988). Titman & Wessels (1989) claim that, if firms with growth options are forced to acquire external finance, they would be inclined to use more short-term debt as opposed to long-term debt.

From a political connections perspective, as growing firms often need to expand long-term operating assets, they therefore require more funds for financing, which connected firms are able to accumulate easily from external sources. Moreover, such firms do not need to lean towards inexpensive retained earnings for further investments since cheaper debt is available to them as a result of political influence. Based on this notion, the following may be hypothesised:

Hypothesis 3d: Firm growth opportunities are more important to politically connected firms in debt financing.

4.3.3.5 Foreign ownership

Foreign ownership brings in not only capital and technology, but also modern management and better governance practices. In addition, firms with foreign ownership are associated with lower idiosyncratic risk and lower default risk, thus making them more favourable to lend credit in credit market. Foreign-owned firms can also access credit through their parent company, and thus insure themselves against liquidity constraints. From the agency cost perspective, it is relatively more difficult for foreign investors to monitor management owing to geographical distance; therefore, there is a demand for higher usage of leverage so as to keep management under control. Essentially, evidence suggests that, owing to relatively easier access to leverage, foreign firms commonly substitute internal borrowing for external borrowing when operating in environments with weak institutions (Desai *et al.*, 2004). With this noted several studies (Blalock *et al.*, 2008; Hussain & Nivorozhkin, 1997) report that foreign-owned firms with greater access to domestic and overseas financing are highly levered. Based on arguments that represent superior capabilities of foreign-owned firms, it can be stated that political connections augment such firms' abilities to acquire credit from domestic financial market. Formally, this perspective is hypothesised as follows:

Hypothesis 3e: Firm foreign ownership is more important to politically connected firms in debt financing.

4.3.3.6 Business groups

Existing evidence from the business group literature shows that the leverage of group-affiliated firms is greater than that of stand-alone firms. The literature supports this statement with several arguments. First, firms affiliated with a group can reduce the expected costs of

default by providing loan guarantees—thus using the assets of one group member as collateral for another—to their group members (Manos *et al.*, 2007). Second, affiliated firms can share group-wide reputation, and thus enhance their access to external creditors (Chang & Hong, 2000). Third, group affiliation can increase access to external finance through using their ability to access policy makers (Ghemawat & Khanna, 1998).

From a political economic standpoint, political connection is regarded as the essence of business groups as they have superior capabilities of establishing valuable political connections (Khanna & Yafeh, 2007); therefore, it is plausible to state that they utilise such a capability to leverage their associated firms. Based on this fact, it is hypothesised that:

Hypothesis 3f: Firm business group affiliation is more important to politically connected firms in debt financing.

Table 4.1 presents the traditional arguments and implications associated with capital structure theories on the relationship between each of the aforementioned firm characteristics and leverage.

Table 4.1: Theoretical arguments and predicted signs on the determinants of leverage

Firm Characteristics	Trade-off theory	Pecking order theory	Agency cost theory	Our Predicted Signs for Connected Firms
Size	(+) Larger firms tend to be more diversified, less risky therefore less prone to bankruptcy.	(−) Larger firms suffer less information asymmetry therefore equity finance is more attractive to them.	(?)	(−) Political connections substitute the importance of size

Collateral	(+) Higher collateralisable assets can be offered as a security to lenders and lead to low cost of financial distress.	(+) Lower information asymmetries.	(+) Higher tangible assets diminish the lender's risk of suffering agency cost of debt.	(—) Political connections substitute the importance of collateral
Profitability	(+) Profitable firms can face bankruptcy costs more strongly than less profitable firms.	(—) Higher possibilities of retained earnings	(+) Firms employ leverage to avert managers from wasting financial resources.	(+) Profitable firms have more ability to engage in costly political activity and thereby benefit themselves from leverage.
Growth-opportunities	(—) Growth opportunities are not being used as collateral and cause higher costs of financial distress.	(+) Growing firms need more funds, and they prefer debt over equity.	(—) Highly levered firms pass-up positive investment opportunities and suffer underinvestment problems.	(+) Growing firms require more funds therefore tend to accumulate more leverage
Foreign ownership	(?)	(?)	(+) Firms having investors located abroad use leverage to monitor management.	(+) Superior capabilities of foreign firms enable them to accumulate more leverage
Business group affiliation	(?)	(?)	(—) Complex business structure increases the information asymmetric problems	(+) Superior capabilities of group affiliated firms enable them to accumulate more leverage

4.4 Data

Data sources

Firm-level data used in this study comes mainly from OSIRIS, operated by Bureau Van Dijk, which provides financial details and information regarding Board members of over 70,000 listed firms across the world. In addition, information on business group affiliation is obtained from the Rehman (2006), which reports the list of top business groups (based on their size) and their associated firms in Pakistan³⁵. Subsequently, in an attempt to identify the firm's connections with politicians, there is a need to garner data on politicians. In this regard, we relied on the dataset provided by the Election Commission of Pakistan (ECP)³⁶. The ECP conducts elections for the National and Provincial Assemblies, and further maintains the comprehensive information on national and provincial elections, including candidates list, complete with their full names, parties' positions, and electoral outcomes. Since there have been only two general (national and provincial) elections within the last decade and a half, general elections held in 2002 and 2008, therefore the sample period 2002–2010 is selected to include these two election periods, and also to maximise the number of observations possible throughout the analysis. Importantly, there were around 272 national and 577 provincial constituencies in each election, with 6–9 candidates per constituency, and a total of over 10,500 candidates for both elections.

Sample selection

The sample includes non-financial listed firms from Pakistan for the period 2002–2010. The decision to restrict the sample only to the non-financial sector is owing to the accounting treatment of revenue and profits for financial firms (banks, insurance and investment firms) being significantly different to that of non-financial firms. Rajan & Zingales (1995) argue

³⁵ Similar source is used in several other studies to identify the business group affiliation in Pakistan, such as Masulis *et al.* (2011), Ashraf and Ghani (2005), and Candland (2007).

³⁶ Khwaja and Mian (2005) have employed the same dataset to identify the political connections in Pakistani. Data can accessible through the following link: <http://www.ecp.gov.pk/>

that the leverage of financial firms is highly affected by explicit (or implicit) investor insurance schemes, such as deposit insurance. In addition, the capital structure of such firms is influenced by regulatory requirements; therefore, it is not appropriate to compare the financing policies of such firms with non-financial firms. Another decisive factor put forward in the data selection criteria is that, for each firm, it is necessary to report a minimum two consecutive years' information in order to assess the changes in the financing structure of the firm. Moreover, those firms with missing values for the important variables are also removed from the sample. After applying these restrictions, the final sample includes an unbalanced panel of 2,199 firm-year observations of 380 firms.

Matching firms to politicians

Following the mainstream literature (Khwaja & Mian, 2005; Boubakri *et al.*, 2009; Faccio, 2006), in this study, a firm is defined as connected if it has a politician on its Board of Directors. A politician is defined as any individual who stood in the national or provincial election, held in 2002 and 2008³⁷. A politician's full name is matched to a firm director if their full (first, middle, and last) names match exactly, that firm is then considered as a politically connected firm. Whilst so doing, 107 politicians were matched with firms' directors. No politician was matched to more than one firm; therefore, 107 firms were identified as politically connected firms. These firms are further divided based on electoral outcomes: of the 107 connected firms, 62 are connected to winning politicians (58%), and 87 relate to politicians of a winning party (69%)³⁸.

³⁷ Note that here we employ the definition of firm's political connectedness as the personal connection between politicians and specific firms (through directors) rather than institutional ownership.

³⁸ In order to avoid the human error, we conducted the sample selection procedure with the given restrictions and matching of politicians with the firm's board of directors by applying programming code, which is available in Appendix.

Sample distribution

Table 4.2 presents the distribution of the sampled firms through political connections, business groups, location, and ownership. In order to identify the group affiliation of the sample, a list of top-30 business groups and their associated firms (published in Rehman, 2006) is used. Following this list, 105 firms are identified as business group-affiliated, with 275 firms considered as stand-alone firms. Next, firms are divided into two sub-groups based on their location: first, the firms located in the two biggest cities in the country—Karachi and Lahore—are 57 % of the overall sample and 87% of the connected firms; second, the firms located in the rest of the country represent 13% of the connected firms. Finally, the firms encompassing foreign ownership constitute 11% of the total sample and 8% of the connected firms' sample.

Table 4.2: Description of the sample

<i>A. Full sample, politically connected and non-connected firms</i>						
	<i>Total sample</i>		<i>Political connected</i>		<i>Non-connected</i>	
	<i>Number</i>	<i>Percentage</i>	<i>Number</i>	<i>Percentage</i>	<i>Number</i>	<i>Percentage</i>
<i>Total number of firms</i>	380	100	107	28	273	72
<i>By business group</i>						
<i>Group-affiliates</i>	105	27	49	46	56	21
<i>Stand-alone</i>	275	73	58	54	217	79
<i>By location</i>						
<i>Major cities</i>	219	57	93	87	126	46
<i>Other cities</i>	161	43	14	13	147	54
<i>By ownership</i>						
<i>Foreign owned</i>	42	11	9	8	33	12
<i>Domestic owned</i>	338	89	98	92	240	88

<i>B. Political connected firms</i>		
	<i>Number</i>	<i>Percentage</i>
<i>By politician's electoral outcomes</i>		
<i>Connected to incumbent</i>	62	58
<i>Connected to loser</i>	45	42
<i>By party electoral outcomes</i>		
<i>Connected to winning party</i>	74	69
<i>Connected to opposition party</i>	23	31

Overall, the sample distribution shows that mainly politically connected firms are affiliated to business groups and located in the two largest cities of Pakistan. Moreover, in terms of ownership, most of these politically connected firms are domestically owned.

Variables measurement and univariate analysis

Following Fan *et al.*, (2008) and Khwaja & Mian (2005), leverage is used as a dependent variable to measure access to debt-financing. An important aspect of leverage measure is the book value and the market value of leverage. Considering the financial market of Pakistan, the debt structure of Pakistani firms is based mainly on bank loans rather than corporate

bonds, thus making the measurement different. As Arif (2007) reports that most Pakistani firms do not issue bonds to raise finance, but rather use bank loans as a financing source; therefore, the leverage of Pakistani firms is regarded as a bank loan and calculated by their book value. In addition, Myers (1977) justifies the use of book values on the basis that the book value of leverage relates to the value of assets in place, and does not normally include the capitalisation value of future growth opportunities that makes book values more stable measure. Barclay *et al.* (1995) argue that book values primarily reflect the collateral (fixed assets), which rules out the possibility of distortions in values caused by the volatility of market prices. Moreover, Kisgen (2005) asserts that financial managers regard book value as more reliable since it is not as volatile and does not change as often as market value. Therefore, following Chen (2004) and Cassar and Holmes (2003), total leverage is defined as the ratio of the book value of a firm's total debt (short-term and long-term) to the total assets³⁹.

Since most firm borrowings in Pakistan are from banks, the leverage variable may be viewed as a proxy for bank debt⁴⁰. Prior studies, such as those of Boubakri *et al.* (2008), Fan *et al.* (2008), and Khwaja & Mian (2005) report that the percentage of long-term debt is higher than short-term debt amongst connected firms. On the other hand, short-term debt might mitigate under- and overinvestment problems; since the debt contract arises for negotiation before the completion of the projects. Hence, creditors can monitor the operation and investment decisions of the firms (Charumilind *et al.*, 2006). In this analysis, leverage is therefore further divided on the basis of its maturity. Long-term leverage is measured as the

³⁹ These measures of leverage are used in other empirical studies include Rajan and Zingales (1995); Titman and Wessels (1988); Bevan and Danbolt (2002); Dessi and Robertson (2003); and Wald (1999).

⁴⁰ Due to the unavailability of data, we could not distinguish between borrowing from state-owned and private banks. Therefore, leverage variable includes the loan from both sorts of banks.

book value of a firm's long-term debt divided by its total assets, and short-term leverage is measured as the book value of a firm's short-term debt divided by its total assets. Table 4.3 provides the definitions and sources of the variables used in this study.

Table 4.3: Variables definitions and data sources

<i>Variables</i>	<i>Definition</i>	<i>Source</i>
<i>POLITICAL</i>	A firm is considered as connected if firm has a politician on its board	OSIRIS
<i>CONNECTIONS</i> (<i>PC</i>)	of directors and a politician is defined as any individual who stood in the national or provincial election, held in 2002 and 2008.	and ECP
<i>TOTAL LEV</i>	Ratio of book value of firm's total debt (short term and long term) to total assets.	OSIRIS
<i>LONG-TERM LEV</i>	Book value of firm's long-term debt divided by its total assets.	OSIRIS
<i>SHORT-TERM LEV</i>	Book value of firm's short-term debt divided by its total assets.	OSIRIS
<i>SIZE</i>	Natural logarithm of total assets	OSIRIS
<i>COLLATERAL</i>	Ratio of fixed to total assets	OSIRIS
<i>PROFIT</i>	Profit before taxes divided by total assets	OSIRIS
<i>GROWTH-OPPOR</i>	Price earnings ratio	OSIRIS
<i>FOREIGN</i>	A dummy variable that is equal to 1 if at least 10 percent of its stock is foreign owned, 0 otherwise.	OSIRIS
<i>BUS-GROUP</i>	A dummy variable that takes value 1 if a firm is affiliated with top 30 Pakistani business groups, 0 otherwise.	Rehman (2006)
<i>LOCATION</i>	A dummy variable equals to 1 if a firm's headquarter is located in two largest cities of Pakistan: Karachi or Lahore, 0 otherwise.	OSIRIS

There are a number of independent variables appearing in the previous studies that are likely to affect the extent of political patronage, including size, collateral, profitability, growth opportunity, ownership, and business group. In fact, the analysis was restricted to these factors owing to the fact that they have been consistently used in previous related studies (such as Fraser *et al.*, 2006; Charumilind *et al.*, 2006). The natural logarithm of total assets (*SIZE*) is used as a measure of firm size. The ratio of fixed to total assets (*COLLATERAL*) is used to capture the effect of collateral on the use of leverage. Collateral is considered a

guarantee for lenders when a firm seeks external funding, particularly if it controls the maturity matching effect on financing structure. Firm profitability (PROFIT) is measured by profit before taxes, divided by total assets⁴¹. Subsequently, the price earnings ratio is included as a proxy for future growth opportunities (GROWTH-OPP). An indicator of growth opportunities rests in the fact that it shows the expected value of future profit of a firm; therefore, a higher price earnings ratio shows high growth opportunities. In addition, as price earnings is given by the ratio of the price that investors are willing to pay to buy a share and earnings per share, the market's prices thus predict the firm's potential growth opportunities, and the stock market capitalises its present value (Kumar & Hyodo, 2001). The impact of firm ownership—whether domestically or foreign owned—is controlled by introducing a dummy variable. The dummy variable (FOREIGN) takes the value 1 if at least 10% of its stock is foreign owned. This definition of foreign ownership is also used in other studies, such as Javorcik & Spatareanu (2011) and Kimura & Kiyota (2007). Finally, the effect of business group is controlled by a dummy variable (BUS-GROUP), which takes value 1 if a firm is affiliated with the top 30 Pakistani business groups (based on their sizes) identified in Rehman (2006). More specifically, the book mentions the 38 top business groups in Pakistan. Amongst those 8 business houses, notably only comprising non-listed and/or financial firms, we could therefore match our sample firms only to remaining 30 business group-affiliated firms. Other studies that have used the similar source to identify the business group affiliation in Pakistan include Masulis *et al.* (2011), Ashraf & Ghani (2005), and Candland (2007). In order to control for the potential influence of outliers, all variables are winsorised at the 5th and 95th values.

⁴¹ The profitability variable is calculated in OSIRIS database with this definition.

The comparison of financing pattern and firms' characteristics between firms with and without political connection is presented in Table 4.4. As hypothesised, connected firms tend to have relatively more total leverage than the non-connected firms. Specifically, politically connected firms have a total leverage to assets ratio of 67%, as compared with a lower 61% for firms without connections. This difference is strongly significant at the 1% level. Similarly, the mean ratio of long-term loans to total assets of connected firms is 27%, whilst that of non-connected firms is only 23%. The difference is statistically significant at the 5% level. In contrast, the mean ratio of short-term debt to total assets is slightly higher for non-connected firms, having 41% compared with 40% of connected firms. However, the difference is statistically insignificant. The overall more usage of short-term debt than long-term debt, irrespective of political connections in the Pakistani market, confirms the prediction of financial theory, which accordingly implies that firms in developing countries may have less long-term debt simply owing to institutional inefficiencies. Studies such as those by Barclay & Smith (1995), and Demirguc-Kunt & Maksimovic (1999) report that firms in developing countries tend to make less use of long-term debt owing to deficiencies (i.e. contract enforcement, and information asymmetry) in the credit market.

Table 4.4: Descriptive statistics for key variables

	<i>Total sample</i>				<i>Political Connected firms</i>				<i>Non-connected firms</i>				<i>Mean difference (t-statistics)</i>
	<i>Mean</i>	<i>St. Dev</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>St. Dev</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>St. Dev</i>	<i>Min</i>	<i>Max</i>	
<i>TOTAL LEV</i>	0.64	0.25	0.22	1.26	0.67	0.24	0.22	1.26	0.61	0.25	0.23	1.25	-3.38***
<i>LONG-TERM LEV</i>	0.26	0.21	0.07	0.77	0.27	0.21	0.07	0.77	0.23	0.22	0.08	0.74	-2.27**
<i>SHORT-TERM LEV</i>	0.41	0.20	0.10	0.88	0.40	0.19	0.10	0.88	0.41	0.20	0.10	0.86	0.94
<i>SIZE</i>	6.30	0.66	5.15	8.22	6.33	0.61	5.15	7.59	6.28	0.68	5.21	8.22	-1.66*
<i>COLLAT</i>	0.49	0.21	0.09	0.86	0.49	0.21	0.13	0.86	0.48	0.21	0.09	0.84	-0.66
<i>PROFIT</i>	5.94	10.91	-13.72	11.85	4.39	10.26	-13.72	11.85	6.64	11.12	-7.94	9.85	4.44***
<i>GROWTH-OPPOR</i>	8.16	5.78	0.93	11.46	8.28	5.88	0.98	11.46	8.10	5.73	0.93	10.21	-0.65
<i>FOREIGN</i>	0.13	0.34	0	1	0.10	0.30	0	1	0.15	0.36	0	1	3.22***
<i>BUS-GROUP</i>	0.27	0.44	0	1	0.41	0.49	0	1	0.20	0.40	0	1	-10.19***
<i>LOCATION</i>	0.60	0.48	0	1	0.86	0.34	0	1	0.49	0.50	0	1	-7.48***

* significant at 10%, ** significant at 5%, *** significant at 1%

Further, whether the difference in the use of total and long-term debt between the connected and non-connected firms attributable, in relation to the differences in firm characteristics, is investigated. It is found that firms with political ties are larger—measured by assets size—than non-connected firms, which may subsequently explain their higher leverage. The difference is statistically significant at the 10% level. Interestingly, when compared to non-connected firms, connected firms are significantly less profitable (in terms of return on assets). It implies that less profitable firms establish political connections in order to maximise their profits. Furthermore, growth opportunities, as measured by the price earnings ratio, and collateral (ratio of fixed to total assets) do not differ across firms' groups.

In terms of firm ownership, those organisations with political ties are more domestic-owned when contrasted alongside firms without such ties. This difference is strongly significant at the 1% level. Furthermore, significant differences were found across these groups in terms of their business group affiliation and location. Group affiliations are higher amongst politically connected firms (almost double) than non-connected firms, and are further located in the major cities (two major cities, namely Karachi and Lahore) of Pakistan. The overall findings indicate that larger size, low profitability, domestic ownership, group affiliation and location are important firm-specific factors contributing to the establishment of political connections. This preliminary investigation offers some degree of support for our conjecture that connection with politicians is relevant within the credit market.

4.5 Methodology

4.5.1 Model specification

In order to test the main hypothesis of this study, which posits that, *ceteris paribus*, due to preferential treatment in the credit market, firms with political connections maintain a higher

degree of leverage than non-connected firms, the standard corporate finance model is adopted. Following the works of Charumilind *et al.* (2006), Fraser *et al.* (2006), Rajan & Zingales (1995) and Harris & Raviv (1990), we estimate the following baseline model using panel data:

$$LEVERAGE_{it} = \alpha + \beta_1 PC_{it} + \beta_2 SIZE_{it} + \beta_3 COLLAT_{it} + \beta_4 PROFIT_{it} + \beta_5 GROWTH - OPP_{it} + \beta_6 FOREIGN_{it} + \beta_7 BUS-GROUP_{it} + DumInd + DumYear + \varepsilon_{it} \quad (1)$$

where the dependent variable LEVERAGE is the debt of a firm in a given year. PC is our variable of interest that is a time-invariant dummy variable, indicating the firm's political connectedness. SIZE is the size of a firm, COLLAT refers to the collateral, PROFIT is the profitability, GROWTH-OPP stands for growth opportunities, FOREIGN represents foreign ownership, and BUS-GROUP is the business group affiliation of a firm. Finally, DumYear are 8 dummies for the period 2002–2010, DumInd are 7 dummies at the two-digit level of SIC, and ε is the error term⁴². The measurement of such variables is discussed in the last section. The given model resembles the framework used in the context of political patronage studies of Charumilind *et al.* (2006) and Fraser *et al.* (2006) except for the inclusion of a firm's foreign ownership and business group-affiliation. As has been discussed earlier in Section 4.3.3.5 and Section 4.3.3.6, foreign firms and business group affiliates have superior capabilities, all facilitating them in terms of establishing valuable political connections—particularly in the context of a developing country (as Pakistan), where business group-affiliation and foreign ownership are recognised as antidotes of market imperfections⁴³. Indeed, many authors such as Khanna & Palepu (2000) and Sembenelli & Schiantarelli

⁴² Following Aharony *et al.* (2010) and Campbell (1996), we re-classified two-digit SIC to a narrower 8 industry-category. Industry classification details are given in the Chapter 3, section 3.4.

⁴³ The significance of business groups to firms in developing countries is discussed with sufficient details in chapter 3.

(2000) regard business group affiliation and foreign ownership as an antidote to market frictions⁴⁴; therefore, such firm-level variables have been incorporated into the model so as to control the effects of group affiliation and foreign ownership.

The subsequent analysis tests the impacts associated with the electoral outcomes on the leverage of politically connected firms. More specifically, it investigates the empirical question: what happens to a politically connected firm's borrowing when its politician or political party wins an election? Winning or being a member of a winning party increases the political strength of politician to obtain even greater preferential access to credit from banks, and accordingly benefits its connected firm. In order to investigate this empirical question, two dummies, POLWIN (for politician winning effect) and PARTYWIN (for party winning effect), are employed in the model (1) as an alternative proxy for political connections (PC). The positive and significant signs would reflect the exercise of political power.

To test the third objective of this study—the examination of the significance of standard firm-specific determinants of leverage for politically connected firms in terms of accessing debt—six interactive variables are introduced within the model (1). More specifically, all firm-level control variables used in the model (1) are interacted with the dummy variable (PC), capturing the political patronage. The estimated model adopts the following form:

$$\begin{aligned}
 LEVERAGE_{it} = & \alpha + \beta_1 PC_{it} + \beta_2 SIZE_{it} + \beta_3 COLLAT_{it} + \beta_4 PROFIT_{it} + \beta_5 GROWTH - \\
 & OPP_{it} + \beta_6 FOREIGN_{it} + \beta_7 BUS - GROUP_{it} + \beta_8 PC_{it} \times SIZE_{it} + \beta_9 PC_{it} \times COL \\
 & LAT_{it} + \beta_{10} PC_{it} \times PROFIT_{it} + \beta_{11} PC_{it} \times GROWTH - OPP_{it} + \\
 & \beta_{12} PC_{it} \times FOREIGN_{it} + \beta_{13} PC_{it} \times BUS - GROUP_{it} + DumInd + \\
 & DumYear + \varepsilon_{it}
 \end{aligned} \tag{2}$$

⁴⁴ Franklin *et al.* (2005) argue that foreign owned firms use domestic credit simply due to preferential interest rates and/or for hedging purposes.

To investigate the relationship between political connectedness and leverage, all firms are pooled together, connected and non-connected, in all estimations.

4.5.2 Estimation technique

Regressions are carried out through the use of a pooled regression model. With pooled regression, there is the probability that residuals are correlated across years within each firm; standard errors can be biased, and either over or underestimate the true variability of the coefficient estimates. Therefore, pooled regression is estimated with heteroskedasticity-consistent robust standard errors clustered at the firm's level. By so doing, firm (cluster) is correlated, although we assume independence across firms (clusters)⁴⁵.

Related studies examining political patronage extensively employed the pooled regression estimation technique with robust standard errors clustered at a firm level. Such studies include Khwaja & Mian (2005), Bunkanwanicha & Wiwattanakantang (2009), Claessens *et al.* (2008), Poyry & Maury (2010), Dinc (2005), Boubakri *et al.* (2009), Dombrovsky (2008), Jayachandran (2006), and Spienza (2004). In addition, basic pooled regression, without clustering robust standard errors, have also been used in others, such as those by Li *et al.* (2009), Charumilind *et al.* (2006), Ferguson & Voth (2008), Agarwal & Knoeber (2000), and Desai & Olofsgard (2011)⁴⁶.

⁴⁵ In addition, as a robustness check we have re-estimated our basic result using Heckman two-stage analysis technique.

⁴⁶ In addition to pooled regression, Agarwal and Knoeber (2000) also employed logit model with a binary dependent variable for connected outside directors, and Desai and Olofsgard (2011) estimated the results with instrumental variable technique.

4.6 Estimation results

4.6.1 Political connections and leverage

We test out first hypothesis that politically connected firms have higher degree of leverage than non-connected firms. Table 4.5 shows the pooled regression results. For a robustness check, the estimations are run both with and without firms' control variables. All models include year and industry-fixed effects which, for the sake of brevity, are not reported. In columns 1 and 2, the regression results for the impact of political connectedness—which is indicated by dummy variable (PC)—on total leverage are presented. The outcomes in column 1—not including firm characteristic—strongly support the first hypothesis. The estimated coefficient on political connection (PC) is positive and statistically significant at the 1% level. The magnitude of coefficient indicates that firms with political connections have, on average, a higher ratio of total debt to total assets with 7.4%. The results hold even when the control variables are included in the estimation, as shown in column 2. The estimated coefficient is recognised as significant at 5%, with magnitude showing that connected firms have 5.2% more total debt than their non-connected peers. So the empirical findings support the first hypothesis that connected firms have higher leverage than non-connected firms. Such results are consistent with Faccio (2006), Khwaja & Mian (2005), Cull & Xu (2005), Dinç (2005) and Johnson & Mitton (2003), all of which illustrate the higher borrowing of connected firms.

Table 4.5: Impact of political connections on leverage

Independent Variables	<i>TOTAL LEV</i>		<i>LONG-TERM LEV</i>		<i>SHORT-TERM LEV</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>PC</i>	0.074*** (0.00)	0.052** (0.03)	0.046** (0.01)	0.036** (0.01)	-0.029 (0.11)	-0.023 (0.39)
<i>SIZE</i>		0.023** (0.04)		0.029** (0.04)		0.018** (0.02)
<i>COLLAT</i>		0.090*** (0.00)		0.121*** (0.00)		0.096*** (0.00)
<i>PROFIT</i>		-0.019*** (0.00)		-0.012*** (0.00)		-0.016*** (0.00)
<i>GROWTH-OPP</i>		-0.022 (0.56)		-0.016 (0.47)		-0.031 (0.064)
<i>FOREIGN</i>		0.032 (0.49)		0.028 (0.19)		0.021 (0.53)
<i>BUS-GROUP</i>		1.127*** (0.00)		1.069*** (0.00)		0.102*** (0.00)
<i>CONSTANT</i>	0.736 (0.41)	0.873*** (0.00)	0.265*** (0.00)	0.382*** (0.00)	0.524*** (0.00)	0.845*** (0.00)
<i>Time dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Industries dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs</i>	2199	2199	2199	2199	2199	2199
<i>Adjusted R-square</i>	0.169	0.275	0.113	0.270	0.103	0.274

The table presents the pooled regression. PC is the indicator of political connections. SIZE is the logarithm of the book value of total assets. COLLAT is the ratio of fixed to total assets. PROFIT is the ratio of profit to total assets. GROWTH-OPP is the price earnings ratio. FOREIGN and BUS-GROUP are dummies indicating foreign ownership and business group affiliation. P-values, adjusted for heteroskedasticity and clustering at the firm level, are reported in brackets. * Significant at 10%, ** significant at 5%, *** significant at 1%.

The analysis is extended to examine whether such high utilisation of leverage varies across debt maturity structure. In columns 3 and 4, the dependent variable is long-term debt to total assets, and columns 5 and 6 have short-term debt to total assets as a dependent variable. Focus is initially placed on findings for long-term debt. In column 3, the estimated coefficient on political connection is both positive and significant at 5% level, thus indicating that firms with political ties have higher long-term debt. The magnitude of coefficient implies that connections increase a firm's long-term leverage by 4.6%. Upon repeating the regression

with control variables column 4, the sign and statistical significance does not change. Subsequently, we turn to the short-term leverage; surprisingly, a negative but insignificant coefficient for political connection variable is established (column 5). This suggests that political connections do not affect a firm's access to short-term leverage, which is a result remaining unchanged—even after the inclusion of the control variables (column 6). The results achieved for short-term debt supports the univariate finding that there is no statistically significant difference in relation to short-term debt utilisation amongst connected and non-connected firms.

Regarding the effects of firm characteristics on leverage utilisation, overall, the results support the predictions of corporate finance literature. The coefficient on size variable (SIZE) is positive and significant, irrespective of debt maturity structure. Larger firms in Pakistan carry more leverage. Similarly, the coefficients on fixed assets ratio (COLLAT) are positive and statistically significant at 1% level in regard to all three estimations (columns 2, 4 and 6). Firms with low agency costs are likely to use more leverage. Larger and higher tangible assets-possessing firms have smaller information asymmetry, thus resulting in low agency costs. The results obtained confirm this conjecture. In a less developed financial market, as is the case in Pakistan, firms rely on larger size—which may also be recognised as a proxy for the inverse likelihood of default—and collateralisable assets to obtain external credit. These results strengthen the evidence provided by Fraser *et al.* (2006) and Booth *et al.* (2001), a positive role of size and fixed assets in reducing information asymmetry is established. Next, the coefficient for profitability (PROFIT) is negative and statistically significant at 1% level in all estimations, which indicates that profitable firms in Pakistan—regardless of debt maturity—carry less debt. This result is consistent with related studies (Titman & Wessels, 1998; Fraser *et al.*, 2006; Booth *et al.*, 2001; Wald, 1999), therefore signifying that, despite

the tax-shelter gain associated with leverage, profitable firms employ less leverage in their capital structure. The coefficients for growth opportunities (GROWTH-OPP) are found to be negative but ultimately statistically insignificant across all three regressions, suggesting an insignificant role of growth opportunities in accessing leverage amongst Pakistani firms. In a similar vein, the insignificant sign of foreign ownership (FOREIGN), in relation to all three estimations, indicates that foreign ownership is not an important predictor of access to leverage in Pakistan. Finally, affiliation to business groups (BUS-GROUP) is found to be positively and significantly (at 1% level) related to all measures of leverage. The firms operating in an environment with undeveloped financial intermediaries and weak contract enforcement institutions, such as in Pakistan, affiliate to business groups so as to reduce financial constraints. The result for group affiliates is consistent with the works of Khanna & Yafeh (2007), Khwaja *et al.* (2009) and Ghemawat & Khanna (1998), all of which report a higher level of financial leverage for group affiliates as compared to stand-alone firms. The values of adjusted R^2 , ranging from 11% to 27%, show the satisfactory explanatory power of the estimated models.

The overall evidence presented in Tables 4.5 suggests that, as hypothesised, political connectedness has a positive effect on the firm's total leverage. Once the leverage is dissected into long-term and short-term debt, this result holds only for long-term debt. Firms use their political ties to obtain more long-term leverage. On the other hand, political connections are found to have no impact on short-term leverage. These findings remained unchanged when the firm control variables are included in the regressions. In sum, political connectedness appears to be a determining factor only for the long-term financing decision of firms. The understandable rationale for such results is the fragile political environment within the country, as in the last two decades three elected governments were dissolved before even

completing their half-terms, consequently connected firms try to finalise the loan deals for a longer period to avoid renegotiation. On the other hand, firms avoid short-term debt, as politicians do not stay in power for very long, therefore, firms cannot exercise their political influence on banks to similar extent as when their connected politicians hold office, consequently firms may face difficulty in rescheduling the loan. Taken together, the volatile political environment leads political connections to insert positive impact only on long-term debt. In general, our results present a further dimension of firm-specific characteristics that may influence corporate financing decision. Accordingly, political connection needs to be included in the studies of capital structure alongside the traditional determinants of leverage proposed by various theories.

4.6.2 Political strength

It has been seen that political connections in Pakistan facilitates firms achieving greater access to external credit. This study delves a level deeper and extends this analysis by examining whether or not such preferential treatment varies according to the strength of the firm's politician, if the politician holds office, or the politician belongs to the ruling party (that is, a part of ruling coalition). In order to test this hypothesis, a distinction is made between connected firms according to the strength of their politician by introducing two dummies in the baseline specification: first, POLWIN distinguishes between firms belonging to a winning politician or a losing one; second, PARTYWIN differentiates between firms having a politician that is a member of the winning party or opposition party. Two separate regressions are run in order to check the effects of the winning of the politician (politician winning effect) and effect of belonging to a winning party (party winning effect).

Table 4.6: Impact of political strength on leverage

Independent Variables	Politician winning effect			Party winning effect		
	<i>TOTAL</i>	<i>LONG-TERM</i>	<i>SHORT-TERM</i>	<i>TOTAL</i>	<i>LONG-TERM</i>	<i>SHORT-</i>
	<i>LEV</i>	<i>LEV</i>	<i>LEV</i>	<i>LEV</i>	<i>LEV</i>	<i>TERM LEV</i>
	(1)	(2)	(3)	(4)	(5)	(6)
<i>POL-WIN</i>	0.069** (0.01)	0.058** (0.03)	-0.020 (0.022)			
<i>PARTY-WIN</i>				0.081* (0.09)	0.066* (0.05)	-0.014 (0.46)
<i>SIZE</i>	0.041** (0.01)	0.037** (0.04)	0.014* (0.09)	0.027* (0.05)	0.026** (0.02)	0.013* (0.05)
<i>COLLAT</i>	0.106** (0.01)	0.121** (0.02)	0.102** (0.01)	0.096*** (0.00)	0.127*** (0.00)	0.081*** (0.00)
<i>PROFIT</i>	-0.036** (0.04)	-0.029*** (0.00)	-0.034** (0.02)	-0.023 (0.19)	-0.017 (0.30)	-0.024 (0.21)
<i>GROWTH-OPP</i>	-0.043 (0.31)	-0.014 (0.48)	-0.025 (0.32)	-0.031 (0.72)	0.023 (0.12)	-0.029 (0.41)
<i>FOREIGN</i>	0.044 (0.11)	0.041 (0.37)	0.037 (0.12)	0.029 (0.15)	0.027 (0.18)	0.034 (0.022)
<i>BUS-GROUP</i>	1.108** (0.01)	1.185*** (0.00)	0.107*** (0.00)	1.123*** (0.00)	1.084*** (0.00)	0.093** (0.01)
<i>CONSTANT</i>	0.872*** (0.00)	0.819** (0.01)	0.645** (0.03)	0.866*** (0.00)	0.781** (0.02)	0.769*** (0.00)
<i>Time dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Industries dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs</i>	2199	2199	2199	2199	2199	2199
<i>Adjusted R-square</i>	0.275	0.269	0.271	0.283	0.276	0.264

The table presents the pooled regression. Columns (1)-(3) report the winning effect of politician. Columns (4)-(6) report the party winning effect. POL-WIN is a dummy variable takes value 1 if politician is a winner. PARTY-WIN is a dummy variable taking 1 if connected politician belongs to the ruling party. SIZE is the logarithm of the book value of total assets. COLLAT is the ratio of fixed to total assets. PROFIT is the ratio of profit to total assets. GROWTH-OPP is the price earnings ratio. FOREIGN and BUS-GROUP are dummies indicating foreign ownership and business group affiliation. P-values, adjusted for heteroskedasticity and clustering at the firm level, are reported in brackets. * Significant at 10%, ** significant at 5%, *** significant at 1%.

Results are shown in Table 4.6. Initially, how the winning of a politician affects the total leverage of the connected firm is explored. The regression results in column 1 shows a

positive and statistically significant relationship between the politician winning effect (POLWIN) and total leverage. It implies that firms with a winning politician are able to gain greater access to debt. More specifically, firms connected to winning politicians have 6.9% higher total leverage than their connected peers with losing politicians. In addition, notably, the level of total leverage amongst firms with ties with winning politicians is higher than the total leverage of all connected firms, irrespective of their connections with losing or winning politician (5.2%, as shown in Table 4.5, column 2). This is not surprising when considering the previous results shown in Table 4.5, which also includes the effects of political connections with losing politicians that are supposedly lower than winning politicians. Overall, this result strongly supports the second hypothesis (winning impact) and further confirms the importance of political strength.

Next, similar to the previous estimations routine, the politician's winning effect is investigated in relation to long-term and short-term leverage. With regard to long-term leverage, in column 2 the estimated coefficient on firms with winning politicians is positive and significant at 5% level. The results suggest that firms affiliated with winning politicians use higher long-term leverage. Statistically, those firms connected to winning politicians, on average, have a higher long-term leverage of 5.8% than their counterparts affiliated with losing politicians. In the subsequent estimation, the winning effect of politicians could not bring a positive impact on the usage of short-term leverage of connected firms. Results in column 3 show that the coefficient on firms with winning politicians enters negatively, though not being statistically different to zero. It implies that in terms of short-term leverage the firms connected to winning politicians are not much different than the firms related to losing politicians. Regarding firm characteristics in all three regressions, the results for these

variables are qualitatively similar to those obtained in previous estimations (Table 4.5, columns 2, 4 and 6), although the significance of the result is somewhat reduced.

Our next empirical task is centred on examining the effect of politician on leverage if the individual belongs to the ruling party. Results in column 4 are shown for total leverage. The variable of interest PARTYWIN has a positive coefficient that is significant at the 10% level. These results can be interpreted as the affiliation to a politician belonging to a winning party (coalition) increases the access to the finance of the connected firm. Statistically, those firms connected to governing coalition, on average, have a higher total leverage of 8.1% than their peers affiliated with opposition party. One aspect worth noting is that the winning effect of the party is more pronounced than the winning effect of the politician. This finding can be attributed to the fact that the ruling party manages and distributes financial resources, and affiliated politicians have more political power in terms of influencing the lending decisions of governmental and private financial institutions. On the other hand, besides winning the election, if a politician is not a part of the ruling party, his abilities to extract the political rent would ultimately be limited.

As an extension, the party winning effect is examined in regard to long-term and short-term leverage. The empirical finding for long-term leverage reiterates the party winning effect for total debt by showing a positive coefficient with statistical significance at the 10% level. Results imply a 6.6% increase in long-term debt for those firms relating to politicians affiliated with the winning party. For short-term leverage, once again, a statistical significance could not be found, thus indicating that a politician affiliation to the winning party does not necessarily have any impact on short-term leverage of the connected firm. The results for a firm's characteristics in all three regressions with PARTYWIN follow a very

similar pattern to that shown in the first three columns, except for the loss of significance for profitability in regressions for total debt and long-term debt.

In essence, the overall results presented in Table 4.6 strongly support the second hypothesis of the winning effect. The firms with politician who win or belong to a winning party obtain even greater preferential access to finance; therefore, their level of total leverage and long-term leverage is greater. Nevertheless, winning does not necessarily affect the short-term borrowing of a connected firm. Interestingly, the party-winning effect is relatively higher than the politician winning effect, simply because the politician's ability to influence financial resources increases by relating himself to the ruling party that manages government resources. So, it may be inferred that the winning of politician matters, but what actually matters most is the winning of the politician's party. Our results are consistent with the findings of Khwaja & Mian (2005), Infante & Piazza (2010), and Goldman *et al.* (2009).

4.6.3 Firm characteristics and political patronage

In the previous sections, political connections have been found to facilitate firms in securing preferential access to credit. In this subsection, whether political relationships substitute the significance of firm characteristics in the decisions of leverage is investigated. In order to test this issue, there is the need to simultaneously incorporate connection and firm characteristic variables known to be associated with leverage decision. The mechanism outlined in Section 4.5.1 with Model 2 would allow this investigation to be carried out. The coefficient on an interactive variable measures the way in which the relation between the choice of leverage and relevant firm characteristic varies for firms with and without political connections.

The results are presented in Table 4.7, showing total leverage as a dependent variable in column 1. The coefficient of SIZE remains materially the same as in Table 4.5. The coefficient of the interactive term PC×SIZE is positive and significant at 5% level. Statistically, this indicates that larger firms with political connections carry 7.1% more total leverage than smaller firms with connections. This evidence rejects the third sub-hypothesis (3a), which states that connections substitute the importance of firm size. Contrarily, we find total leverage increasing effect of political patronage is stronger for the larger firms. Next, the effect of size on long-term and short-term leverage for connected firms is tested. Empirical findings for long-term and short-term borrowings in column 2 and 3, respectively, reiterate that larger firms with political patronage carry more long-term and short-term leverage than their non-connected counterparts. Here, unlike the results of previous estimations, positive and significant signs for short-term leverage are achieved. The magnitude on coefficient is low (0.10); however, this signifies the role of political connections amongst large firms in accessing short-term leverage. These findings support the prediction of Trade-off theory, which proclaims that large firms utilise more leverage. The results obtained are in accord with those of Fraser *et al.* (2006), but contradict the findings of Poyry & Maury (2010) and Faccio *et al.* (2006), which show a limited role of size in the presence of political connections to access financial benefits from external market.

Table 4.7: Firm characteristics and political borrowing

Independent Variables	PREDICTED SIGN	TOTAL LEV (1)	LONG-TERM LEV (2)	SHORT-TERM LEV (3)
<i>PC</i>	+	0.045*** (0.00)	0.071** (0.02)	-0.028 (0.16)
<i>SIZE</i>	+	0.035** (0.03)	0.024*** (0.00)	0.012** (0.04)
<i>COLLAT</i>	+	0.079** (0.01)	0.084** (0.02)	0.073*** (0.00)
<i>PROFIT</i>	–	-0.018*** (0.00)	-0.023* (0.18)	-0.032*** (0.00)
<i>GROWTH-OPP</i>	–	-0.032 (0.45)	-0.026 (0.30)	-0.016 (0.13)
<i>FOREIGN</i>	+	0.019 (0.11)	0.034 (0.17)	0.029 (0.51)
<i>BUS-GROUP</i>	+	1.048*** (0.00)	1.056*** (0.00)	0.079*** (0.00)
<i>PC × SIZE</i>	–	0.071** (0.01)	0.046*** (0.00)	0.010* (0.09)
<i>PC × COLLAT</i>	–	-0.036* (0.06)	-0.150** (0.04)	0.054 (0.66)
<i>PC × PROFIT</i>	+	-0.014 (0.61)	0.054 (0.68)	-0.020 (0.82)
<i>PC × GROWTH-OPP</i>	+	0.102 (0.17)	0.054 (0.21)	-0.012 (0.19)
<i>PC × FOREIGN</i>	+	-0.075 (0.60)	-0.017 (0.34)	-0.036 (0.42)
<i>PC × BUS-GROUP</i>	+	1.011*** (0.00)	1.125*** (0.00)	0.017*** (0.00)
<i>CONSTANT</i>		0.751*** (0.00)	0.643*** (0.00)	0.859*** (0.00)
<i>Time dummies</i>		Yes	Yes	Yes
<i>Industries dummies</i>		Yes	Yes	Yes
<i>Number of Obs</i>		2199	2199	2199
<i>Adjusted R-square</i>		0.286	0.249	0.275

The table presents the pooled regression. PC is the indicator of political connections. SIZE is the logarithm of the book value of total assets. COLLAT is the ratio of fixed to total assets. PROFIT is the ratio of profit to total assets. GROWTH-OPP is the price earnings ratio. FOREIGN and BUS-GROUP are dummies indicating foreign ownership and business group affiliation. Robust standard errors in brackets. * Significant at 10%, ** significant at 5%, *** significant at 1%.

The interaction term of the political connection dummy and fixed assets $PC \times COLLAT$ enters the model (having total leverage as dependent variable) with estimated coefficient with opposite sign (negative) to that on the explanatory variable on its own. The coefficient is statistically significant at 10% level. This evidence is supportive of Hypothesis 3b, which suggests that the leverage decision of connected firms, in terms of collateral, is different to that of the non-connected firms. Thereby the results suggest relatively greater importance of collateral for total debt in non-connected firms, whilst in contrast, connected firms appear to use less collateral in their borrowing decisions, which fundamentally contradicts the prediction of both Trade-off and Pecking order theories. The above results support the findings of Charumilind *et al.* (2006), which report a similar relation for long-term borrowing. With regard to debt maturity, this finding could not be supported in the context of short-term borrowing. Coefficients on this interactive term appear to be negative for long-term debt and positive for short-term debt, but statistical significance is achieved only for long-term leverage. The results imply less significance of fixed assets for the connected firms in their financing decisions, which therefore exhibit strong support for the connected lending hypothesis.

The interaction terms between the political connection and explanatory variables—profitability ($PC \times PROFIT$), growth opportunities ($PC \times GROWTH-OPP$) and foreign ownership ($PC \times FOREIGN$)—enter the model with statistically insignificant coefficients. Statistical insignificance is widespread across long-term and short-term debt as well. It indicates that profitability, growth opportunities and foreign ownership are not important determinants of leverage for the connected firms. The insignificant results for profitability are in line with the findings of Charumilind *et al.* (2006), who established that connected Thai firms with greater access to bank loans were no more profitable than firms without

connections. Furthermore, regarding growth opportunities and foreign ownership, the insignificant relationships for these are not surprising, since statistically similar results were also found in Table 4.4 across all estimations. Therefore, it may be interpreted that the growth opportunities and foreign ownership are unimportant to the borrowing decisions of not only non-connected firms but also to connected firms. The irrelevancy of growth opportunities in the loan decisions of connected firms is also shown in Charumilind *et al.* (2006) and Fraser *et al.* (2006).

Finally, the last interaction term PC×BUS-GROUP tests the effect of political connections on the leverage of business group-affiliated firms. The coefficient of the interactive term is positive and strongly significant at 1% level; this result also holds for long-term and short-term debt. Importantly, it implies that group affiliation increases the value of their political connections. Business groups in Pakistan are primarily devices through which rents accrue disproportionately to the handful of families that control major groups. As discussed in Section 4.3, generally, such industrialist families are directly involved in politics, which thus facilitates affiliated firms in terms of exerting influence over lenders and extracting political rents. Therefore, it is quite understandable that group affiliation augments the effect of political connections in terms of preferential lending.

In summary, limited support is found for the third hypothesis as the interaction terms between political connections and firm characteristics—profitability, growth opportunities, and foreign ownership—are statistically insignificant for all leverage measures. The interaction terms between political connections and firm characteristics (collateral and business groups) support the sub-hypotheses. Nevertheless, the evidence for size rejects the sub-hypothesis, and suggests relatively high importance of size for borrowing in the connected firms. Firm

size and group affiliation have an increasing effect on the borrowing capabilities of connected firms. These findings provide stronger support for connected lending hypothesis.

4.6.4 Robustness tests

Endogeneity of political connectedness

One potential concern in the study of the effect of political connections is endogeneity between connectedness and firm leverage. More precisely, some unobserved determinants of firm leverage may also explain political connections, leading pooled regression estimates to be biased and inconsistent. To take into account the possible endogeneity issue pertaining to the relation between political connections and leverage, the regression is re-estimated using the Heckman (1979) two-stage model. Though, to control sample selection bias, propensity score matching technique is also commonly used in finance literature. This is a statistical matching technique which tries to measure the impact of treatment. It yields the predicted probability of treatment obtained from the fitted regression model (Rosenbaum and Rubin 1983). However, owing to wide utilization and easiness in adoptability coerced us to use Heckman model as a sample selection technique. Econometrically, Heckman sample selection model is based on the assumption that firms will self select into the political activity that offers a better match with their resources and thereby economic output. Without modelling such self-selection, a regression of leverage on choice of political connectedness may lead to erroneous results for each connected and non-connected category. If self-selection is not controlled, regression estimates indicate that leverage is independent of political activity choice, whether connected or non-connected.

The first stage of the procedure involves a probit estimation in which a dummy variable indicating the political connections of a firm is regressed against the same independent

variables used in Model 1, plus one additional variable that discerns the firm's political connectedness. That additional variable must be strongly correlated with political connections, but ultimately must be uncorrelated with leverage. Following Boubakri (2009), Agrawal & Knoeber (2001) and Bertrand *et al.* (2007), the firm's location⁴⁷ is selected as a discerning variable (instrument) of political connections. These studies have evidently reported that a firm's location relates only to the political connections—not with other firm characteristics (firms located in larger cities are more likely to have connections with politicians as headquarters of political parties and their associated politicians are mostly locate in large cities). Specifically, in the first-stage regression PC, a dummy variable which takes 1 for connected firms, is regressed against several independent variables including location, size, collateral, profit, growth-opportunities, foreign and business group. In the second-stage analysis, the variable PC in Model 1 is replaced with the fitted value of political connections which is obtained from the first-stage probit model and subsequently estimates the same regression run for earlier tables.

Results for the second stage of regressions are displayed in Table 4.8. In the second stage, the political connections coefficient is positive and significant at 10% level. The magnitude of the coefficient reveals that firms with political connections have, on average, a higher total debt of 3.4% than their non-connected peers. The resulting debt level for connected firms is somewhat smaller than previous findings (5.2%) in Table 4.5. Importantly, inverse Mills ratio (λ) is positive but insignificant, thus suggesting that the self-selection bias is not a problem in our sample. The results for all control variables remained unchanged with the exception of statistical significance dropped. Thus, the results are found to be robust to alternative

⁴⁷Firm location is a dummy variable takes value 1 if a firm's headquarter is located in two largest cities of Pakistan: Karachi or Lahore, 0 otherwise. The importance of these two cities as the leading industrial hubs of country has been discussed in Rehman (2006).

estimation technique, suggesting that politically connected firms appear to have greater access to credit—even after taking into consideration the endogeneity issue in the political connections.

Alternative definition of growth opportunities

Unlike previous empirical studies (Margaritis & Psillaki, 2010), the results obtained in all our estimations do not show growth opportunities as being an important determinant of access to leverage in Pakistan. We suspect that this might be owing to the proxy used for growth opportunities (PE ratio). In order to ensure the irrelevance of growth opportunities to the financial decision and in order to confirm that political lending results are not specific to the growth opportunity measure chosen here, the baseline regression is re-estimated using alternative definition, Tobin's Q, for growth opportunities. Following Opler & Titman (1993), Tobin's Q is defined as the market value of equity plus the book value of total debts divided by total assets. The results, as reported in Table 4.8, show that the coefficient of growth opportunities remains negative and statistically insignificant, whereas total leverage is positively associated with political connections. Hence, overall, the results are robust to the alternative definition of the growth opportunities.

<i>Industries dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	2199	2199	2199	2199	2199	2199	2199	2199
<i>R-square</i>	0.204	0.239	0.283	0.180	0.316	0.221	0.195	0.279

The first column reports the second-stage results from the Heckman selection model. The second column presents the pooled regression. The dependent variable in both columns is the ratio of total leverage to total assets, TOTAL LEV. PC is the indicator of political connections. SIZE is the logarithm of the book value of total assets. COLLAT is the ratio of fixed to total assets. PROFIT is the ratio of profit to total assets. GROWTH-OPP is the price earnings ratio. FOREIGN and BUS-GROUP are dummies indicating foreign ownership and business group affiliation. The inverse Mills ratio is obtained from the probit regression (first-stage of Heckman selection model). First-government and second-government comprised of periods from 2002-2007 and 2008-2010, respectively. P-values, adjusted for heteroskedasticity and clustering at the firm level are reported in brackets. * Significant at 10%, ** significant at 5%, *** significant at 1%.

Political patronage across government periods

The data sample used in this analysis comprised of two government terms: 2002-2007 and 2008-2010. Amongst these government periods, the first government is led by a military dictator, whereas the second is a democratic civil government. Literature on authoritarianism argues that the military dictator distributes state resources amongst its political supporters to experience less agitation and stay in power smoothly (Escriba-Folch & Wright, 2010). Considering this fact, it is anticipated that the degree of leverage amongst connected firms tends to be much higher in the military dictatorial regime than the civil democratic government. To empirically test this postulation, the sample is stratified accordingly into two government periods, namely, first-government period (dictatorial regime) and second-government period (democratic regime). Our empirical strategy remained the same; the baseline leverage model is re-run for both periods independently.

Results are shown in Table 4.8. Firms with political connections have higher total leverage and long-term leverage regardless of government periods. The magnitudes of coefficients on variable PC indicate that there is no significant difference in the impact of political connectedness on the utilization of leverage among connected firms across government periods. As observed in the earlier tables, short-term leverage is not found significant in both government periods. Regarding control variables, the results remain virtually the same as those in Table 4.5. Overall, the sub-period regression results corroborate the findings in Table 4.5, providing support for the fundamental argument that politically connected firms maintain higher leverage. However, results do not lend support to our conjecture for government periods and show no considerable difference in the extent of political patronage in terms of leverage across contrasting government periods.

4.7 Conclusion

This chapter examines the link between firm leverage and political connections in Pakistan using a comprehensive sample of listed firms over an extended nine-year period. The results indicate that connected firms differ significantly in their borrowing decisions from those not connected. In particular, a positive and significant link between the total leverage and the political connections was found. Accordingly, connected firms maintain higher leverage than non-connected firms. The analysis is extended so as to examine whether this higher utilisation of leverage varies across debt maturity structure. Notably, political ties are found to be valuable only in the context of long-term leverage. As connectedness inserts no impact on short-term debt, the level of short-term debt is not higher for connected firms compared with their non-connected peers. Regarding the effects of firm characteristics on debt level, we find that size, collateral, and business groups have positive and statistically significant relationships with leverage. In contrast, profit negatively affects the firm's financing decision. Finally, surprisingly growth opportunities are not revealed as an important determinant of financing decision of Pakistani firms. The results are robust in terms of testing for potential endogeneity and an alternative measure of growth opportunities. These results show the relative importance of political connections as a determinant of leverage.

Subsequently, the impact of politicians' political strength on the borrowing patterns of connected firms is examined. Empirical findings suggest that firms affiliated with a politician holding office, or who belongs to the ruling party are able to achieve greater access to debt. Specifically, such firms maintain higher total and long-term leverage; however, short-term leverage does not seem to be affected from the political power of a politician. It is worth noting that the party-winning effect is more pronounced than the politician-winning effect

owing to higher political power being associated with politicians belonging to a winning party, which in turn enables them to exert influence on the lending decisions of creditors.

Finally, we investigate whether political relationships substitute the significance of firm characteristics in financing decisions. The results suggest that larger and group-affiliated connected firms tend to carry more leverage, irrespective of debt maturity, than mere firms with connections. Moreover, connected firms appear to use less collateral in their borrowing decisions. Overall, the results for firm characteristic strengthen our connected lending conjecture.

CHAPTER 5: POLITICAL CONNECTIONS AND FIRM PERFORMANCE—THE CASE OF A DEVELOPING COUNTRY

5.1 Introduction

Corporate financing decisions are amongst the most important decisions made by firm management. Finance theory has long argued that corporate financial policies—particularly the use of leverage—affect firms overall performance (Campello, 2005; Kovenock & Phillips, 1997; Maksimovic, 1988). The central argument of studies investigating this relationship rotates around the risk-shifting incentives offered by leverage usage to equity holders, as well as the strategic consequences of such incentives that ultimately either boost or hinder firm performance. Accordingly, we believe that the high leverage connected firms maintain—as evident in Chapter Four—may also have a significant impact on firm performance; this is also the motivation for this chapter. Additionally, although the idea of corporate political connections, as a source of preferential leverage, is a powerful theoretical construct and a useful first step, one must nevertheless reach beyond the leverage and investigate the way in which it impacts firm performance.

The existing empirical evidence acknowledges both positive and negative returns to political connections in terms of corporate profitability (Boubakri *et al.*, 2008; Dombrovsky, 2008; Fan *et al.*, 2008). Considering the positive impact, there are several reasons behind why politically connected firms might have superior performance to their non-connected counterparts. Firstly and most importantly, the preferential access to credit leads to a competitive advantage for a firm, which can be translated into better performance (Faccio, 2006; Yeh *et al.*, 2012; Li *et al.*, 2008). Secondly, politicians are often outsiders to the corporate world, and may prove beneficial to firms by providing an independent view that

eventually positively affects firm performance (Niessen & Ruenzi, 2010). Thirdly, politicians are generally better informed about the future economic policies, and so their insight might have a positive impact on firm performance. On the other hand, studies advocating the negative relationship between political connections and firm performance argue that a politically connected Board does not have managerial incentives to maximise shareholders' wealth and improve overall firm performance (Boubakri *et al.*, 2008). Furthermore, other studies, such as that of Dewenter *et al.* (1997) suggest that politically connected firms forgo maximum profit in the pursuit of social and political objectives. Taken together, available empirical studies present a mixed picture of the influence a firm's performance should have as a result of their political connections.

In this chapter, we report further empirical evidence on the performance of politically connected firms through employing Pakistan as our empirical setting because of number of reasons. First, political connections are commonplace in Pakistan and have a greater impact on firm behaviour. Considering the weak legal system and the higher degree of corruption, the value of political connections is likely to be greater than in more developed countries (Khwaja & Mian, 2005). Second, in contrast to the previous studies from developing economies that took political patronage in a limited sense, where corporate political benefits can only be extracted through affiliating with a single powerful politician (i.e. Suharto in Indonesia and Mahathir in Malaysia)⁴⁸, many politicians are in a position to benefit their affiliated firms in Pakistan. In addition, the ability to extract political benefits varies depending on the political strength of a politician. In this respect, Pakistan offers useful variation in the type of political connections that can be used to examine this phenomenon. Third, in this decade, Pakistan undertook drastic steps to curb political corruption. A new law

⁴⁸ These studies include, Fisman (2001), Leuz and Oberholzer-Gee (2006); and Johnson and Mitten (2003).

stipulates that public officials must declare their assets. Moreover, the National Anti-Corruption Strategy (NACS) was introduced in 2002 with the aim of eliminating corruption from the political system. Nevertheless, many sceptics question the efficiency of such initiatives, as the accountability process is obstructed in a number of different ways, such as a constitutional bill, which was first introduced to exempt judiciary and armed forces from accountability, and the National Reconciliation Ordinance (NRO), which granted amnesty to politicians accused of corruption and embezzlement. Accordingly, whether connected firms in Pakistan benefit from political favours under the reformed period is an open question. These features provide a natural and excellent research setting when examining the relationship between the business and the politics, which can help us in terms of developing a deeper understanding of the consequences of political affiliations.

Using the panel data of Pakistani listed firms during 2002–2010, evidence is provided that politically connected firms—defined as if the director participates in an election—shows poorer performance than those without connections. These results are estimated with instrumental variable techniques, and are robust in regard to alternative performance measures (return on equity, and Tobin’s Q), endogeneity problems, and various specifications that control for a number of variables, and which are likely to be correlated with corporate performance.

Through this analysis, it is recognised that the data sample period of 2002–2010 covers two elected government terms. Amongst these governments, the first elected government is led by a military dictator, whilst the second is a democratic civil government⁴⁹. Literature on

⁴⁹ By a democratic regime, we mean a form of government where a set of institutions that allow the citizens to select the makers of public policy in free and competitive elections, whereas autocratic (military dictatorial) government is considered as a form of government where the political power is limited to a one person and

authoritarianism asserts that the military dictator builds supporting political coalitions whose loyalty is largely dependent on obtaining patronage resources from the dictator (Escriba-Folch & Wright, 2010). To ensure such coalition remains intact, it is necessary for the dictator to distribute benefits to the coalition. The extent of political patronage therefore tends to be much higher in the military dictator regime than the civil democratic government. If this is the case, then considering the positive affect of political connections on firm performance, it can be argued that the value of political connections in terms of a firm's performance should be greater in a dictatorial regime. To empirically test this conjecture, the sample is stratified into two broad categories based on time period—'first-government' period (dictatorial authoritarian regime) and 'second-government' period (democratic regime)—with the firm's performance model run separately for each sample⁵⁰. In contrast to our prediction, results show that a negative impact of connections is more pronounced in the dictatorial period, providing evidence of severe managerial inefficiencies and rent-extraction by the affiliated politicians in the dictatorship regime.

There is vast literature suggesting that firms with more growth opportunities employ lesser leverage and adopt policies so that they can be less dependent on external finance, such as through the distribution of fewer dividends, and the utilisation of more stock option plans in order to achieve employee motivation (Smith & Watts, 1992; Gaver & Gaver, 1993; Lehn *et al.*, 1990). Given their distinctive financing strategies, it may also be argued that firms with high-growth options are less likely to depend on political connections—as is evident from Khwaja & Mian (2005), who show that political connections matter most through preferential access to credit in Pakistan; therefore, performance would not be deteriorated to a similar

came to power through uncompetitive elections that have restricted entry for candidates (Gleditsch and Ward, 2006). The political setup of the given sample period is discussed in the next section.

⁵⁰ Throughout this chapter we have used 'first-government' period and dictatorial regime; and 'second-government' period and democratic regime, interchangeably.

extent as low-growth firms. This notion is tested empirically, and our results reveal that growth opportunities play an important role in determining the impact of political connections on firm performance. Consistent with this conjecture, the results suggest that the performance of firms with more growth opportunities is not distorted by political connections. In the final part of this chapter, the role of firm-specific characteristics on the performance of connected firms is investigated. The results provide limited support for the importance of these determinants in explaining performance. In particular, only business group-affiliation has an increasing effect on the performance of connected firms while, for firm size, results suggest that large firms are subject to more severe performance distortions than small firms.

This chapter attempts to make two principal contributions to the literature. The first is a provision of new evidence to the promising and growing literature linking politics to firm performance. In contrast to prior studies that have implicitly assumed the analogous impact of political connections across different political environment, this study emphasises the varying nature of political environments and their ultimate impacts on firm performance. In fact, this study is amongst the first, to our knowledge, to analyse the way in which political connectedness affects firm performance in two contrasting political environments. The second contribution is centred on examining the role of growth opportunities in moderating the degree of influence political connections has on firm performance. Although prior work has extensively investigated the relationship between growth opportunities and firm performance (Ho *et al.*, 2004; Gaver & Gaver, 1993), the extent to which firm political connections affect the relationship has received little attention thus far—a gap this study helps fill. In sum, this study constitutes a first step towards reconciling the contradictory

findings on the impact of political connections on firm performance by introducing the political environment and growth opportunities into this arena.

This chapter unfolds as follows: Section 5.2 describes the Pakistani political setup and the two contrasting political regimes; Section 5.3 outlines the hypotheses of the study that have to be tested throughout the analysis; Section 5.4 describes the data, and further presents the empirical design; and Section 5.5 provides the descriptive statistics on used variables. Empirical findings are then reported and discussed in Section 5.6. Lastly, Section 5.7 presents the conclusions of the study.

5.2 The Pakistani political system and two contrasting political regimes

In this section, a brief overview is provided of the electoral system in Pakistan and the political settings of two political regimes: the dictatorial regime (2002–2007) and the democratic regime (2008–2010). Pakistan is known to encompass a federal system of government with a bicameral Senate or upper house (104 seats), and the National Assembly or Lower House (342 seats). The majority of the lower house seats are elected on a first-past-the-post basis for a five-year term. Much like the United Kingdom, the Cabinet of Pakistan is also headed by the Prime Minister, and is an instrument of executive power. The Senate is equally representative of all four provincial assemblies and Federally Administered Tribal Areas (FATA); therefore, the total numbers of seats is periodically adjusted in order to reflect population shifts⁵¹. Mainly, the Senate has an advisory role, whilst the National Assembly does most of the work and is responsible for the fiscal billing. In terms of provincial elections, Pakistan comprises four provinces: all four have their own elected provincial

⁵¹ The current Senate consists of 104 senators, having equal representation of all four provincial assemblies (23 members from each province), FATA (8 members) and capital territory (4 members).

assemblies and governments, which are headed by their Chief Ministers. The elections for provincial assemblies are held concurrently with the National Assembly election. The main parties consistently participating in the elections include the Pakistan People's Party (PPP), Pakistan Muslim League-Nawaz (PML-N), Pakistan Muslim League-Quaid (PML-Q), Muttahida Qaumi Movement (MQM), and Awami National Party (ANP).

Since independence in 1947, Pakistan has been struggling to establish a parliamentary democracy in a federal setting, which has been fundamentally handicapped by the inter-ethnic strife, social strains, and fragmented elites (Monshipouri & Samuel, 1995). A weak democratic setup and corrupt political leadership always provides military rulers with an excuse to meddle in national political affairs. Accordingly, the military has ruled the country for more than half of Pakistan's entire existence (Haqqani, 2006). Such dictators have sought to take every step possible to weaken the democratic system in order to remain in power (Behuria, 2009; Hussain, 2009). General Musharraf's period conformed to the earlier pattern. As Musharraf assumed power in October 1999 following the dislodging of the elected civilian government, the constitution was suspended, and the national and provincial assemblies were dissolved in order to impose military rule⁵².

General Musharraf carefully wrapped the dictatorship in constitutional and civil rule. In this regard, in 2002, he designed the transition process to share power with a group of politicians whilst himself remaining as an effective president. In so doing, prior to conducting the election in October 2002, he searched for like-minded politicians with the aim of establishing a party that would serve as the establishment party in coming elections (Rizvi, 2010). It did

⁵² Given the duration of our sample period, 2002-2010, there are two general elections held during this period, we therefore restrict our discussion only to political settings of these two elections.

not take long for him to conjure up in parliament a political party of loyalists in an environment where changing political loyalty was quite common in pursuit of personal benefits (Behuria, 2009). Consequently, a breakaway faction of the PML-N formed the new party labelled as the PML-Q. In the aftermath of the election, as expected, the PML-Q emerged as the single largest party in National Assembly, which subsequently established a coalition government with two other leading parties—MQM and ANP. Against this support, large-scale patronage-type benefits were distributed amongst those who supported the military regime through the immense clientelistic network. The coalition government completed its five-year term under the command of General Musharraf, with the next general elections announced for January 8, 2008⁵³. However, at this time, the demands of the political parties to hold a fair and free election were immense. In addition, the pressure from international community to ensure genuine democracy compounded with the domestic juridical conflicts caused a veritable menace to the dictatorial regime. The outcomes of the general elections on February 18, 2008 turned the tide against Musharraf, and accordingly led to a hung house, with PML-N and PPP sharing a comfortable majority. These two parties subsequently decided to enter into an alliance in order to form a coalition government (Behuria, 2009). Within six months of the new government, Musharraf was eventually forced to resign from the presidency⁵⁴.

The economy of Pakistan has been largely dependent on agriculture from its very establishment, which has given rise to two main elite groups—migrated industrialists and landowners; these quickly and overwhelmingly controlled most of the country's industry and

⁵³ General elections were postponed for 40 days due to the assassination of former Prime Minister Benazir Bhutto on December 27, 2007.

⁵⁴ Recall that we see democratic government as a form of government which is selected through competitive elections and political power is in the hands of selected individuals. In contrast, autocratic government is a form of government where the political power is limited to a one person and came to power through uncompetitive elections that have restricted entry for candidates.

commerce (Monshipouri & Samuel, 1995). Subsequently, most industrialists entered politics—arguably with the aim of protecting and expanding their interests. For example, at the creation of Pakistan, Yusuf Haroon, a leading industrialist, was the first Chief Minister of Sindh province, and persons like Ahmad Dawood (founding owner of Dawood group), Naseer A Sheikh (founding owner of Colony group), and Rafiq Saigol (founding owner of Saigol group) held important official posts in the ruling parties and governments (Rehman, 2006). The existing leadership of the foremost parties, namely PPP, PML-N, PML-Q and ANP, is also controlled by the big businessmen⁵⁵. To be sure, PPP leadership has been dominated by the landowners in the beginning, but currently it is headed by Asif A. Zardari, who is a leading industrialist. Politicians in the legislature and in government who have a business background have readily represented their particularistic interests. For example, *The News*, a Pakistani newspaper, reported how, during 2002–2007, National bank and United Bank of Pakistan allotted loans worth Rs. 120 million to the Chauhadry Group (President of PML-Q) against their textile and sugar mills on preferential terms, which were later written off. Based on this discussion, this relationship between the business and the politics will be examined empirically in the coming sections.

5.3 Theory and hypotheses development

In this section, the main hypotheses to be tested in this chapter are developed. These hypotheses are as follows:

⁵⁵ Nawaz Sharif (owner of Ittefaq Foundries) is the president of PML-N and Chauhadry Shujaat Hussain (owner of Chauhadry Group) is the president of PML-Q.

5.3.1 Firm performance

The Agency theory argues that the separation of firm control and ownership potentially leads to managerial self-serving actions; therefore, a monitoring mechanism is required in order to protect shareholder interests (Jensen & Meckling, 1976). Researchers recognise that, when monitoring is costly and actions are partly unobservable, managers may exert less effort, consume perquisites, or seek to maximise their own utility as opposed to shareholders' value (Fama, 1980). The agency conflict can be resolved by providing managers with various incentives so as to align their goals with those of shareholders (Fama & Jensen, 1983). However, there are various other mechanisms that may help to overcome agency issues and accordingly improve firm performance, such as proficient monitoring, threat of takeover, bankruptcy, or reputational capital (Desai *et al.*, 2003; Holmstrom, 1979). Monitoring practices that align shareholders' and managers' interests and accordingly avert managers from self-serving objectives should be positively related to firm performance.

In this setting, we argue that politicians, as directors, may be able to monitor and control the management in better manner owing to their presumed independence relative to insiders, and that this would ultimately improve firm performance. In the spirit of Fama & Jensen (1983), it is argued further that politicians, as directors, have a greater incentive to monitor firm decisions on the behalf of all shareholders as these politicians have to establish reputations in general public as decision experts⁵⁶. The types of resources politically connected directors bring to a firm may include intangible reputation, as well as various tangible economic benefits (Peng, 2004). More specifically, in less developed economies, politicians

⁵⁶ A recent example illustrating the value of politician' reputational capital as a director is the rising fame of Pakistani politician Imran Khan (party leader of Pakistan Tehrik-e-Insaf) in the general public who has served as a director of two most proficient institutions, namely, Shaukat Khanum Hospital and Namal University. Generally, his established decisional efficacy in running the companies is considered as an evidence of required abilities to run to country in an excellent manner.

predominantly act as sources of financial favours, and help in terms of obtaining debt on more favourable terms, which can be translated into better firm performance through the utilisation of such favours (preferential credit), thus facilitating the financing of available investment opportunities. With this in mind, it is expected that a positive effect will be observed of such corporate political connections on firm performance.

A number of recent studies recognise the economic advantages the firms can gain from establishing connections with politicians. Anecdotal evidence suggests that political connections matter most through preferential access to finance. Findings by Faccio (2006), Khwaja & Mian (2005), Yeh *et al.* (2012) and Houston *et al.* (2012) document that connected firms enjoy easier access to debt financing, mostly from banks, even though they are not worth this extra credit⁵⁷. Considering the effect of political connections one step further, it is plausible to believe that such preferential lending may also affect firm performance. If efficiently allocated, such inexpensive credit could provide connected firms with a comparative advantage over competitors; these advantages should reflect favourably on their performances. In this vein, Boubakri *et al.* (2009) find that politically connected firms increase their performance after establishing political connections. Similarly, Ferguson & Voth (2008), Li *et al.* (2009), Braggion & Moore (2011) and Dombrovsky (2008) report that connected firms outperform those firms without connections.

On the other hand, studies such as that carried out by Asquer & Calderoni (2011) report the negative effect of political connections on Italian firms' performance. Similarly, Bertrand *et al.* (2007) note that firm connectedness leads to a lower rate of return on assets. They attribute this finding to the fact that connected firms design their policies in pursuance of

⁵⁷ The detailed discussion of these empirical findings is provided in the chapter 2, section 2.4.

political objectives, and thus forgo firms' own profit maximisation objectives. In a recent study, Faccio (2010) provides similar evidence, showing that connected firms have lower performance rates than non-connected firms.

Putting the above contradictory findings together, it may be stated that the body of empirical evidence is inconclusive for the impact of political connections on performance. Nevertheless, following basic intuition, political connectedness accumulates benefits from politicians that should be reflected in the performance of connected firms; thus, we anticipate positive impact of political connections on performance. Thus, the main testable hypothesis is as follows:

Hypothesis 1A: Politically connected firms have better performance than non-connected firms.

In contrast, there are studies advocating the negative relationship between political connections and firm performance which argue that a politically connected Board does not have managerial incentives to maximise shareholders' wealth and improve overall firm performance (Boubakri *et al.*, 2008). Furthermore, other studies, such as that of Dewenter *et al.* (1997) suggest that politically connected firms forgo maximum profit in the pursuit of social and political objectives. More importantly, considering low institutional development and higher extent of corruption in less developed economy such as Pakistan the impact of political connections tends to be negative. Following these arguments, our competing hypothesis can be formulated as follows:

Hypothesis 1B: Politically connected firms have poorer performance than non-connected firms.

The literature on authoritarianism asserts that nondemocratic regimes require solicit economic cooperation so as to remain in power (Escriba-Folch & Wright, 2010; Wintrobe, 1998). Central to these studies is the contention that dictators can reduce the likelihood of being deposed through cooperating with potentially threatening political elements. In so doing, dictators mostly build supporting coalition—the loyalty of which is largely dependent on obtaining patronage resources from the dictator. The instruments by which dictators buy the loyalty of politicians include policy concessions, favourable lending, and the distribution of spoils (Gandhi & Przeworski, 2007). In such a scenario, all factions within regime have incentives to cooperate with the intention of staying in power; therefore, they exploit the system collectively.

Based on the aforementioned arguments, it is expected that a higher extent of political rent will be observed in the first government period owing to the fact that it was a dictator-backed government. Given that political connections induce a positive effect on firm performance, it is most likely that the performance of connected firms is better in the first government period than in the second democratic government period (due to more political favours). This prediction is presented in the hypothesis below:

Hypothesis 2: Politically connected firms have better performance in the first-government period (dictatorial regime) than connected firms in the second-government period (democratic regime).

5.3.2 Impact of growth opportunities and firm performance

It has been widely argued that the impact of imperfection in capital market is more acute on high-growth firms (Himmelberg & Peterson, 1994; Ozkan & Ozkan, 2004). The argument stems from the fact that growing firms hold most of their value in growth opportunities that are likely to have little or no collateralisable net worth, which subsequently increases the costs of external finance for these firms. Consequently, growing firms with insufficient tangible assets are likely to pass up valuable investment opportunities. Under such circumstances, firms with growth opportunities adopt policies that mitigate underinvestment problems, such as greater reliance on internal capital and less on leverage, and pay a lower level of dividends so as to increase the internal capital stock (Chow *et al.*, 2011; Gaver & Gaver, 1993). Considering this fact, firms with higher level growth options rely less on leverage, and thus it may be hypothesised that such firms are less likely to depend on political connections, and their performance therefore would not be deteriorated to a similar extent as low-growth firms.

Hypothesis 3: Politically connected firms with more growth opportunities have higher performance than connected firms with less growth opportunities.

5.3.3 Interaction effect of political connections and firm size

It is unclear that every firm responds to political relationships in the same way, and this is precisely where firm-specific attributes may be important. Firm size is an important factor with the potential to determine the outcome level firms obtain through political influence. Previous research recognises that better financial resources enable large firms to accumulate stronger political connections and to accordingly extract more political rents out of these links. For instance, Faccio (2006) indicates that political connections are more widespread

amongst large firms, and their level of leverage is greater than small firms. Similarly, Fraser *et al.* (2005) report a higher value of political connections for the large firms. In contrast, researchers argue that, besides connection advantage, large organisations may also have alternative resources when striving to attain competitive advantage over smaller counterparts, such as private funds and foreign listing. As a result, large firms may experience greater diminishing returns from their political affiliations, whilst small firms will take connections as being more valuable so as to enhance their competitive positions within the market (Jia *et al.*, 2011). In this regard, Faccio *et al.* (2006) observe that the extent of political favours in terms of government bailouts do not change across firm size. Similarly, Poyry & Maury (2010) report a negative relationship between firm size and preferential treatment for connected firms. They attribute their findings to the fact that, since large firms possess more resources, they are more likely to get more political interferences owing to the fact that such firms are more of a lucrative target of political patronage than small firms. Following the arguments of this strand of literature, the following may be tested:

Hypothesis 4: Firm size relates negatively to the performance of politically connected firms.

5.3.4 Interaction effect of political connections and foreign ownership

Different forms of ownership also play an important role in determining what firms have to gain from political connections. A substantial literature shows that firms with foreign ownership possess not only modern technology and better management, but also the ability to influence policy decisions (Chhibber & Majumdar, 2005; Dunning, 1993). Such characteristics make them likely to perform better than domestic firms. Studies such as those by Harris & Robinson (2003), Harris (2002) and Girma *et al.* (2005) find evidence that foreign-owned firms perform better than domestic counterparts.

From a political economic standpoint, both domestic- and foreign-owned firms may reap substantial benefits from political connections. Nevertheless, the extent to which political gain varies across ownership type depends a great deal on the superior capabilities of the firms. Thereby, the distinctive features associated with foreign-owned firms enable them to use political ties to grab more advantageous positions in the market through translating the benefits of connectedness into better performance. Accordingly, in an attempt to test this conjecture, the following hypothesis is formulated:

Hypothesis 5: Foreign owned politically connected firms exhibit better performance than the domestic connected firms.

5.3.5 Interaction effect of political connections and business group affiliation

In the literature, the significance of business groups is supported mainly through economic perspective (Leff, 1978; Khanna & Palepu, 2000). This perspective conceives business groups as being an ultimate response to market failures and associated costs. In such an environment, group affiliation facilitates firms in terms of reducing transaction costs by easing information flows between firms or otherwise by aligning the interests of firms and striving collectively towards mutual benefit (Khanna & Rivkin, 2006). Moreover, such groups may also use their broad scope to smooth out income flows, and thus ensure access to internal capital in an environment in which external finance is costly and difficult to access. Collectively, group affiliation is expected to lead to capability spillovers amongst affiliates, which may positively affect the economic performance of individual firms.

From the political connections perspective, business groups are considered to be the product of favourable government policies that encourage the formation and development of groups

(Colpan *et al.*, 2010). As such, close political ties are regarded as being the ultimate outcome of such a formation, which is somewhat a precondition for business groups to develop and sustain within the market (Khanna, 2000). Due to the significant position in the economy, business groups always remain in the position of capitalising the economic rent derived from political ties, which ultimately improve the competitiveness and performance of group affiliates. The above arguments lead to the following hypothesis:

Hypothesis 6: Group affiliated politically connected firms exhibit better performance than the stand-alone connected firms.

5.4 Research design

5.4.1 Data sources and sample selection criteria

The data for this study is taken through various sources⁵⁸. Data on firm financial characteristics is taken from the OSIRIS, a commercial database supported by Bureau van Dijk, over the period 2002–2010. Thereafter, information on business group affiliation is collected from the book Rehman (2006). The data on politicians—which is reviewed with the objective to identify the firms with ties to politicians—is obtained from the official website of Election Commission of Pakistan (ECP), which conducts elections for the National and Provincial Assemblies⁵⁹. Financial institutions and banks are excluded from the data, in addition to any observations with missing values in the variables used in this study. Moreover, each firm is required to have a minimum two consecutive years' information to assess the changes in the financing structure of the firm. Following the application of these

⁵⁸ For the ease of readers, the data sources and sample selection criteria is rewritten here in this chapter.

⁵⁹ Data is available at the following URL: <http://www.ecp.gov.pk/>

sample selection criteria, the resulting sample comprises 2,199 firm-year observations of 380 non-financial listed firms during the period 2002–2010.

In order to identify the politically connected firms, the list comprising names of politicians—those who participated in the 2002 and/or 2008 elections—was obtained from the Election Commission of Pakistan and matched with the full names of the firms’ directors (obtained from the OSIRIS) one by one. By so doing, 107 politicians were matched to firms’ directors. No politician was matched to more than one firm; therefore, 107 firms were identified as politically connected firms. Moreover, so as to identify foreign ownership, following Javorcik & Spatareanu (2011) and Kimura & Kiyota (2007), we define a firm to be foreign-owned if at least 10% of its stock is foreign-owned. Following this definition, 42 firms are identified as foreign-owned whereas 338 firms are considered domestic firms. To establish the business group-affiliation of our sample, a list of top-30 business groups and their associated firms is used, which is available in a book by Rehman (2006); notably, this is the updated edition of the book that focuses on the 38 top business groups in Pakistan. Amongst those 8 business houses, comprised only of non-listed and/or financial firms, the sample set could be aligned only to the remaining 30 business group-affiliated firms. Following this measure, 105 firms in the sample are identified as business group-affiliated, whilst 275 firms are considered stand-alone firms. Other studies known to have utilised similar sources to identify the business group affiliation in Pakistan include Masulis *et al.* (2011), Ashraf & Ghani (2005) and Candland (2007).

Table 5.1 presents the distribution of the sample across political connections, ownership, and business group-affiliation. It reveals that 28% of firms are politically connected, of which 46% are affiliated with business groups and 8% are foreign-owned.

Table 5.1: Sample distribution across connected and non-connected firms

	<i>Total sample</i>		<i>Political connected</i>		<i>Non-connected</i>	
	<i>Number</i>	<i>Percentage</i>	<i>Number</i>	<i>Percentage</i>	<i>Number</i>	<i>Percentage</i>
<i>Total number of firms</i>	380	100	107	28	273	72
<i><u>By ownership</u></i>						
<i>Foreign owned</i>	42	11	9	8	33	12
<i>Domestic owned</i>	338	89	98	92	240	88
<i><u>By business group</u></i>						
<i>Group-affiliates</i>	105	27	49	46	56	21
<i>Stand-alone</i>	275	73	58	54	217	79

5.4.2 Measurement of key variables

Measure of firm performance

Accounting measures are regarded as the most accepted performance measure in literature. Accounting measures are recognised as backward-looking as they evaluate the accomplishment of management and accordingly reflect the efficiency of resource utilised in terms of producing output and creating shareholder value. In contrast, economic measures, i.e. economic value added, are forward-looking, and estimate what management will accomplish (Kao *et al.*, 2004). The utility of accounting measures offers a set of advantages: the first advantage lies in their simplicity and meaningfulness; second, such measures are revealed through an quantitative representation of results of internal and external decisions; third, they are regarded as instruments centred on identifying irregularities in the managerial behaviour; fourth, all stakeholders seem united in their interests in associating these measures since such tools facilitate answering critical financial questions posed to all parties about firm performance (Voulgaris & Doumpos, 2000).

There are various accounting measures for firm performance employed in the existing literature (Krishnan and Moyer, 1994; Gleason *et al.*, 2000; Boubakri *et al.*, 2008, Fan *et al.*, 2008; and Dombrovsky, 2008). Profit maximization, shareholder wealth maximization, return of assets and return on investment are examples of financial performance measures. On the other hand, firm performance is measured in terms of growth opportunities, such as, growth in sales, growth in market share, employment growth, and sales per employee are examples of operational effectiveness measures. Similarly, the concept of measuring total factor productivity (TFP) growth has also garnered its significance in productivity measurement debate which was initiated by the work of Abramovitz (1956). TFP measures the increase in total output which is not explained by increase in total input (i.e. residual of the production function). Mathematically, the level of TFP is the ratio of total output to weighted sum of input, whereas the growth in TFP is the growth rate in total output less the growth rate in total input. Hulten (2000) reports main strengths of TFP as follows: firstly, it provides a complete assessment of performance trend; secondly, it accounts for the changes in various factors of production; finally, TFP offers a ready means of benchmarking for organizational performance comparison. Alongside its strengths, there are limitations of TFP as well. For instance, TFP is sensitive to measurement technique and assumptions. In addition, TFP does not allow for different conditions, output mixes and technology.

Another eminent measure of firm performance is technical efficiency which is based upon deviations of observed output from the best production or efficient production frontier analysis. The fundamentals of frontier analysis lie on the estimation of distance of the observations to the estimated inefficiency (Zhang and Garvey, 2008). Generally, frontier analysis technique can either be parametric or non-parametric. Data envelopment analysis (DAE) comes under the non-parametric approach which classifies any deviation between the

actual production and the frontier as inefficiency without any likelihood of randomness. The principal advantage of DAE technique is that it does not require the specification of a particular functional form for the technology. However, owing to its discrete nature, it is unable to measure statistical noise. On the other hand, stochastic frontier analysis (SFA) is classified as parametric and stochastic approach and includes a source of randomness in production which makes this measure more consistent under normal working conditions. However, SFA is considered as more complicated and requires multiple output distance functions which raise issues for outputs with zero values (Fecher *et al.*, 1993).

Although there are various accounting measures centred on quantifying performance in the literature, for the purpose of this study, however, three measures are adopted—return on assets, return on equity, and Tobin's Q—in common with similar works studying the outcomes of political connections on firms' performance (Boubakri *et al.*, 2008; Fan *et al.*, 2008; Dombrovsky, 2008). Return on assets is the ratio implemented in order to assess the ability of firms to generate return on the total assets available for application (Tezel & McManus, 2003; Krishnan & Moyer, 1994). This is defined as profit before taxes over total assets. Return on equity is the measure used to assess the return on money that shareholders have invested (Brigham *et al.*, 2004). In this study, it is defined as profit before taxes divided by the book value of total shareholders' equity. Tobin's Q is a market-oriented measure of a firm's performance, serving as a proxy for a firm's ability to generate shareholder wealth (Rose, 2007). Tobin's Q is constructed as the market value of equity plus book value of total debts divided by the book value of total assets. Table 5.2 provides the measurement of the aforementioned variables.

Measure of political connectedness

Following mainstream literature (Khwaja & Mian, 2005; Boubakri *et al.*, 2009; Faccio, 2006), a firm is defined as connected if it has a politician on its Board of Directors. A politician is defined as any individual who stood in the national or provincial election, held in 2002 and 2008. A politician's full name is matched to a firm's director if their full (first, middle and last) name matches exactly. In such a situation, the firm is then considered a politically connected firm.

Table 5.2: Variables definitions and data sources

<i>Variables</i>	<i>Acronym</i>	<i>Definition</i>	<i>Source</i>
Return on assets	<i>PERFORMANCE</i>	Profit before taxes divided by total assets	OSIRIS
Return on equity	<i>PERFORMANCE</i>	Profit before taxes divided by book value of total shareholder's equity	OSIRIS
Tobin's Q	<i>PERFORMANCE</i>	Market value of equity plus book value of total debts divided by book value of total assets.	OSIRIS
Political connections	<i>PC</i>	A firm is considered as connected if firm has a politician on its board of directors and a politician is defined as any individual who stood in the national or provincial election, held in 2002 and 2008.	OSIRIS and ECP*
Leverage	<i>LEVERAGE</i>	Ratio of book value of firm's total debt (short term and long term) to total assets.	OSIRIS
Size	<i>SIZE</i>	Natural logarithm of total assets	OSIRIS
Foreign ownership	<i>FOREIGN</i>	A dummy variable that is equal to 1 if at least 10 percent of its stock is foreign owned, 0 otherwise.	OSIRIS
Business group	<i>BUS-GROUP</i>	A dummy variable that takes value 1 if a firm is affiliated with top 30 Pakistani business groups, 0 otherwise.	Rehman (2006)

* Official website of ECP (Election Commission of Pakistan) provides the list of individuals participated in previous elections since 1970.

5.4.3 Estimation model

The regression model used to estimate the impact of political connections on firm performance resembles those of Wu *et al.* (2010), Boubakri *et al.* (2008) and Dombrovsky (2008). It encompasses the following general form:

$$PERFORMANCE_{it} = \alpha + \beta_1 PC_{it} + \beta_2 SIZE_{it} + \beta_3 LEVERAGE_{it} + \beta_4 FOREIGN_{it} + \beta_5 BUS- \\ GROUP_{it} + YearDum + IndDum + \varepsilon \quad (1)$$

Regression Model 1 is also employed for the two subsamples based on government terms.⁶⁰ The dependent variable (PERFORMANCE) capturing performance of firm *i* in year *t*, measured as return on assets (ROA) and return on equity (ROE). PC is a dummy variable measuring the political connections of firms. The definitions of dependent variables and political connections are discussed in Section 5.4.1.

Several variables of potential importance are included in the model. First, firm size (SIZE) is included so as to control for economies of scale effect on performance. The distinctive characteristics of large firms, such as diverse capabilities, economies of scale, and the formalisation of procedures, all facilitate them in generating larger returns on assets and equity (Chhibber & Majumdar, 1999). Chen *et al.* (2009) affirm this conjecture, and further report a positive association between a firm's size and performance. With this noted, a natural log of total assets is used as a proxy of firm size. Second, leverage (LEVERAGE) is an important determinant of a firm's performance in this particular context. Theoretically, free cash flow reasoning suggests that debt mitigates agency problems, and thus increases firms' performance (Fama & Jensen, 1983). In an environment with weak legal institutions and widespread managerial opportunistic behaviour, such as that in Pakistan, it is essential for firms to utilise debt and have some level of monitoring by the lender, which would ultimately induce a positive impact on firm performance. Through this analysis, it is measured as the ratio of total debt to total assets. Third, so as to control for the effect of foreign ownership on a firm's performance, a dummy variable is used to capture foreign ownership (FOREIGN). The dummy variable takes the value of 1 if at least 10% of a stock is foreign-owned and zero

⁶⁰ Since our sampled firms, both connected and non-connected, are same in both government periods therefore sub-samples comprised of same firms but with different observations periods.

otherwise. The impact of firm ownership status—whether domestically or foreign-owned—on its performance has also been discussed at great length, often as a part of the general debate on the control of foreign direct investment in host countries (Malek, 1974). The most commonly cited argument for the positive impact of foreign ownership on performance rests on their superior capabilities in production (Aitken & Harrison, 1999; Dunning, 1981). The possession of such capabilities may ultimately result in the display of superior performance relative to domestically owned firms. However, some critics have long since argued that foreign-owned firms—mostly operating as foreign subsidiaries—tend to shower lower performance than domestic firms (i.e. Malek, 1974). This statement is supported mainly through two arguments: firstly, many manufacturing foreign subsidiaries are established with a predominant interest so as to gain tariff-free access to the host country. Secondly, in some cases, foreign-owned subsidiaries commonly suffer from higher costs of production relative to their parent firm, which subsequently affects their productivity. Both circumstances ultimately tend to deter the performance of foreign-owned firms. Fourth, the effect of business group-affiliation is controlled by including a dummy variable (BUS-GROUP), which takes the value of 1 for the firms affiliated to a business group, and zero if otherwise. Finally, a series of dummy variables is applied to control for time- and industry-specific factors. In order to minimise the impacts of outliers, all variables are winsorized at the 5th and 95th percentiles.

5.4.4 Estimation technique

It has been argued that firm performance may have a substantial impact on lenders' decisions, which thus creates a two-way causality where the degree of leverage may impact corporate performance and vice versa (Dessi & Robertson, 2003). If this is the case, the error term of Equation 1 will be correlated with the endogenous variable, LEVERAGE, generating biased

estimates if the equation is estimated by OLS. In an attempt to confirm such a theoretical prediction, endogeneity is tested in the model by using Hausman (1978) test. The test of endogeneity of leverage examines the null hypothesis that leverage is an exogenous variable. A statistically significant result confirms the theoretical prediction; thus, instrumental technique is required for estimation.

Earlier studies, such as those by Demsetz (1983), Cho (1998) and Demsetz & Villalonga (2001) address the endogeneity issue using an instrumental variable approach—the two-stage least square (2SLS) technique. Therefore, the instrumental variable 2SLS approach is employed, which notably requires an instrumental variable that correlates strongly with leverage, but which does not correlate with firm performance. Following the work of Campello (2005), it is argued that, in the presence of contracting imperfections (as in our case), it is relatively common for lenders to request collateral in an attempt to back all promised repayments. The extent of external finance is therefore seen to correlate with the amount of collateral (fixed assets). Importantly, although firms' asset tangibility correlates with financing but it does not influence firm performance. Campello (2005) suggests that tangibility of assets determines firm's financing capabilities; however it does not influence firm's performance other than through the connection with financing itself. Moreover, in our study, the correlation between asset's tangibility and performance is found 0.16 indicating very weak correlation; whereas the correlation coefficient between asset's tangibility and leverage is 0.74 suggesting strong correlation between them. Hence, the firm's collateral—markedly measured as ratio of fixed to total assets—is a suitable instrument candidate for leverage in the performance equation⁶¹. Econometrically, firms' leverage is regressed against

⁶¹ In estimation, the validity of instrument is also checked by several tests which give confidence in the validity of collateral as instrument.

collateral and other independent variables used in performance Equation 1. Subsequently, the fitted value of leverage is used as regressor in the second-stage equation.

In this empirical strategy, the impact of political connections on firm performance is examined with the use of Equation 1 for the entire period 2002–2010. Subsequently, the sample is stratified into two government periods based on their political nature, with the effect of political connectedness on firm performance estimated in each period independently. The first and second governments comprised periods 2002–2007 and 2008–2010, respectively. One potential concern in this analysis is that firm performances are not comparable across the two samples because of different length of government periods. In order to deal with this problem, following Belghitar & Khan (2012) and Ozkan & Ozkan (2004), we estimate a cross-sectional performance equation using the average values of each of the firm's characteristics over a five-year period (2002–2006) in the first period and two years (2008–2009) in the second period. More specifically, in the first-government period, firm performance is measured (the dependent variable) in 2007, with explanatory variables measured over the period 2002–2006. Similarly, for the second-government period, firm performance (the dependent variable) is measured in 2010 and explanatory variables over the period 2008–2009. By so doing, we are able to compare the average impact of firm characteristics on performance across periods. One additional benefit of implementing this methodology is that, through the use of past values, the possibility of observed relations reflecting the influences of performance on firm characteristics is reduced, especially in regard to political connections.

5.5 Descriptive statistics

Table 5.3 compares the means of variables of firms connected to politicians, and those that are not. It also reports the differences in mean values for variables between the first-government period and the second-government period. Given the distinctive nature of these governments, it is expected that a significant difference in the firms' characteristics be observed across these periods.

In Panel A, the results show a clear tendency for connected firms to be less profitable than non-connected ones. Moreover, the differences in profitability also appear to be statistically significant. More specifically, the average return on assets for connected firms is 4.39, which is recognised as significantly smaller than the value for non-connected firms (6.64). Return on equity shows an even greater difference. For non-connected firms, the mean value of return on equity is 12.72, which exceeds the mean for connected firms (9.48). Subsequently, profitability in terms of Tobin's Q also exhibits a similar pattern of performance; connected firms maintain a lower profitability than non-connected firms. Regarding other characteristics, the statistically significant value on firm size indicates that politically connected firms are larger in size than their non-connected peers. The results on leverage suggest that politically connected firms have higher leverage ratio (0.67) than non-connected firms (0.61), thus providing evidence of political patronage. They also have greater growth opportunities, measured as price-earnings ratio, than non-connected firms, although the difference is recognised as statistically insignificant. Finally, firm investment is higher amongst non-connected firms, and so the result is significant at 5% level.

Subsequently, the means of the variables for the two government periods are reported. Panel B and Panel C of Table 5.3 show that, although both the connected and non-connected firms

experienced large changes in performance measures across government periods, the difference in means between the connected and the non-connected firms for each of the performance measures nevertheless shows a consistent pattern. In both periods, the connected firms underperform in contrast to non-connected firms, and the difference is statistically significant. Furthermore, connected firms hold a higher level of leverage than non-connected firms throughout both periods. Leverage value is 0.65 for connected firms and 0.62 for non-connected firms in the first period, with an average 0.67 for connected firms and 0.64 for non-connected firms in the second period. Similar to Panel A, the mean difference of growth opportunities across connected and the non-connected firms in both periods is found to be statistically insignificant. The results for the firm's size also follow the earlier pattern; however, the mean difference across the connected and non-connected firms is not statistically significant in the first period.

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Table 5.3: Descriptive statistics

	Panel A: Full sample				Panel B: First government period (2002-2007)				Panel C: Second government period (2008-2010)				t-stats (panel B&C)
	Total sample	PC	Non-PC	t-stat	Total sample	PC	Non-PC	t-stat	Total sample	PC	Non-PC	t-stat	PC
Return on assets (ROA)	5.94 (10.91)	4.39 (10.26)	6.64 (11.12)	4.44 ^a	7.27 (10.77)	5.58 (10.05)	8.08 (11.01)	3.93 ^a	4.06 (10.84)	2.47 (10.33)	4.70 (10.98)	2.81 ^a	-3.88 ^a
Return on equity (ROE)	11.72 (16.73)	9.48 (15.70)	12.72 (17.08)	4.21 ^a	14.04 (16.04)	11.70 (14.89)	15.17 (16.79)	3.60 ^a	8.40 (16.82)	5.89 (16.32)	9.42 (16.93)	2.86 ^a	-4.77 ^a
Tobin Q	0.64 (0.25)	0.63 (0.24)	0.67 (0.24)	3.16 ^a	0.63 (0.24)	0.62 (0.23)	0.65 (0.24)	2.17 ^b	0.66 (0.26)	0.65 (0.26)	0.70 (0.25)	2.85 ^a	-2.77 ^a
Size (Size)	6.30 (0.66)	6.33 (0.61)	6.28 (0.68)	-1.66 ^c	6.24 (0.63)	6.26 (0.59)	6.23 (0.65)	-0.65	6.38 (0.69)	6.45 (0.62)	6.35 (0.72)	-2.07 ^b	4.05 ^a
Leverage (Leverage)	0.64 (0.25)	0.67 (0.24)	0.61 (0.25)	-3.38 ^a	0.63 (0.24)	0.65 (0.23)	0.62 (0.24)	-2.20 ^b	0.66 (0.26)	0.67 (0.25)	0.64 (0.26)	-2.86 ^a	2.80
Growth opportunities (Growth-Opp)	8.16 (5.78)	8.28 (5.88)	8.10 (5.73)	-0.65	8.57 (5.35)	8.72 (5.38)	8.50 (5.33)	-0.68	7.55 (6.30)	7.57 (6.57)	7.59 (6.20)	-0.01	-2.49
Observations	2199	682	1517		1292	421	871		907	261	646		

Standard deviations are in parenthesis. PC and Non-PC represents politically connected and politically non-connected firms, respectively. Upper-scripts a, b, and c indicate significance at the 1%, 5%, and 10% level respectively.

Finally, when reviewing the last column of Table 5.3, the mean differences of variables of connected firms across government periods can be seen. The results suggest that connected firms show better performance in the second period than in the first period, with the difference recognised as statistically significant at 1% level. This finding holds for all three performance measures. On the other hand, however, statistically significant mean difference for firm size indicates that connected firms are larger in the first period. Next, unexpectedly, the level of leverage—a foremost form of political gain—is not recognised as being different across the periods, therefore representing that the extent of political patronage is similar in both government periods. Overall, the results suggest that, despite the similar political favours (in form of leverage) in both periods, the connected firms demonstrate superior performance in the second government period. These findings not only contradict the prediction of literature on authoritarian patronage politics by evidencing similar political lending in both governments, but also could not provide support for our prediction for the better performance of the connected firms in the dictatorial government.

5.6 Empirical results and analysis

5.6.1 Political connections and performance

In this section, regression analysis is performed in order to examine the effect of political connections on firm performance. Table 5.4 presents the results of 2SLS regressions using the ROA and ROE as dependent variables. Model 1 takes political connections as a key variable for testing Hypothesis 1. So as to explore the difference in the effects of political connections on firm performance across government periods, Model 1 is estimated for the sub-samples of the first-government period and the second-government period. Panel A reports the estimates of the entire sample, whereas Panel B and Panel C present the results for the first-government and second-government period sub-samples, respectively. All specifications include industry and year dummy variables.

As shown in Column 1 of Table 5.4, the coefficient of PC is negative and statistically significant at the 5% level, which indicates that firms with political connections have a lower return on assets than those without connections. More specifically, the connected firms yield, on average, 23.6% lower return on their available assets than non-connected firms. To establish this finding more firmly, the model is re-estimated with the alternative measure of firm performance—ROE. The effect of political connections on ROE is also found negative. The results in Column 2 show that firms with political connections underperform when compared with those without political connections by 18.2%. This suggests that politicians exacerbate agency problems by coercing management to engage in self-interested actions that protect the interests of politicians, thus deteriorating firm performance. Our finding is in line with those of other studies, such as Fan *et al.* (2008), Faccio (2006, 2010), and Khwaja & Mian (2005), all of whom report poor performance for connected firms.

Table 5.4: Estimation results of basic model examining the impact of political connections on performance

Independent Variables	Panel (A)		Panel (B)		Panel (C)	
	Entire period		First-government		Second-government	
	ROA	ROE	ROA	ROE	ROA	ROE
	(1)	(2)	(3)	(4)	(5)	(6)
<i>PC</i>	-0.236** (0.02)	-0.182** (0.01)	-0.173** (0.01)	-0.141* (0.06)	-0.132* (0.06)	-0.125** (0.04)
<i>SIZE</i>	0.068** (0.04)	0.086* (0.09)	0.074* (0.07)	0.091* (0.08)	0.066* (0.06)	0.084* (0.09)
<i>LEVERAGE</i>	-0.115** (0.03)	-0.079*** (0.00)	-0.118** (0.04)	-0.127** (0.01)	-0.198 (0.11)	-0.180 (0.10)
<i>FOREIGN</i>	0.075* (0.09)	0.114** (0.06)	0.239 (0.14)	0.262 (0.18)	0.170* (0.09)	0.144** (0.04)
<i>BUS-GROUP</i>	0.093 (0.56)	0.074 (0.33)	0.037 (0.51)	0.029 (0.36)	0.086 (0.59)	0.114 (0.38)
<i>CONSTANT</i>	0.459*** (0.00)	0.654*** (0.00)	0.257*** (0.00)	0.434** (0.04)	0.503** (0.03)	0.320** (0.01)
<i>Time dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Industries dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	2199	2199	1292	1292	907	907
<i>Number of Firms</i>	380	380	380	380	380	380
<i>R-square</i>	0.131	0.244	0.106	0.121	0.246	0.150
<i>F-statistics</i>	254.84	391.26	26.05	23.72	27.01	32.64
<i>Hansen-Sargan test (p-value)</i>	0.106	0.409	0.138	0.164	0.104	0.239

Panel (A) shows second-stage results of 2SLS regression results for the entire period (2002-2010). Panel (B) and (C) show the cross-sectional regression results for the first-government (2002-2007) and the second-government (2008-2010), respectively. The dependent variable in Panel (B) is measured in 2007, and the averages of the independent variables are measured over the period 2002-2006. Similarly, in Panel (C) the dependent variable is measured in 2010 and the averages of the independent variables are calculated over the period 2008-2009. The dependent variable in all regressions is return on assets (ROA) and return on equity (ROE). In the first-stage leverage is instrumented with collateral, defined as the ratio of tangible to the total assets, and all other independent variables used in the baseline model. F-test tests for weak identification. The Hansen-Sargan test is a test of overidentifying restrictions with the null hypothesis that instruments are valid. P-values, adjusted for heteroskedasticity, are in brackets. * Significant and 10%, ** significant at 5%, *** significant at 1%.

The control variable for firm size (SIZE), as expected, is found positive and significant at 5% level, supporting the notion that large firms have more resources and market power to exhibit

better performance. Next, unexpectedly, leverage (LEVERAGE) has a negative and significant effect on firm performance, indicating that higher leverage exerts a negative influence on performance. The negative relationship may be attributed to the high cost of borrowing in the Pakistani market. The real cost of borrowing in Pakistan is 15%–20%, which is phenomenally high by international standards. For high-levered firms to pay such high interest rates, gross margin on sale has to be exceptionally high, which is arduous in a market where demand constraints are significant and the benefits of liberalisation has not yet been fully recognised. Consequently, levered firms are considerably less profitable than firms with a low degree of debt. Next, foreign ownership (FOREIGN) is found to have positive and significant effects on both the measures of performance, thus indicating that foreign ownership is an important determinant of firm performance. Owing to firm-specific assets associated with foreign ownership, such as superior technology, managerial ability, and effective corporate governance, there is a competitive advantage over domestic-owned firms that may result in better performance. The result strengthens the evidence provided by Chhibber & Majumdar (2005), where superior performance by foreign-owned firms is observed. Lastly, business group affiliation (BUS-GROUP) is positively but insignificantly associated with performance indicating that business group affiliations have no impact on the firm performance. We can justify our result with the negative traits associated with business groups, related mainly to their monopoly powers, moral hazard, and inefficient investment. One much discussed negative trait that is also prevalent in the Pakistani market is the pyramidal structure of business groups (Ikram & Naqvi, 2005). Such a structure enables an apex firm to control other grouped firms without having made commensurate capital investments (Guest & Sutherland, 2010). This form of structure distorts firm performance and ultimately destroys firm value. The irrelevance of group affiliation supports the finding of Gohar & Karacaer (2009), who state similar results for Pakistani group-affiliated firms.

We now proceed to analysis whether performance of connected firms systematically differs across government terms. In this regard, as hypothesised, given the different political nature of governments, the impact of connections is expected to be different in both government periods. In order to carry out such an analysis, our sample is stratified into two broad categories as the first-government period (2002–2007) and the second-government period (2008–2010), with the cross-sectional regression estimated separately based on Equation 1 for each sample. More specifically, in the first-government period, firm performance (the dependent variable) in 2007 is measured, and explanatory variables over the period 2002–2006, and for the second-government period, firm performance (the dependent variable) in 2010 is measured, and explanatory variables over the period 2008–2009.

Panel B and Panel C present the estimation results for the cross-sectional performance equation. The estimated coefficient on political connections is negative and significant in both periods. The magnitude of the coefficients for ROA indicates that connected firms underperform when compared with non-connected firms by 17.3% in the first-government and 13.2% in the second-government. The effect of political connections on ROE follows a very similar pattern. The magnitude of coefficients indicates that the firm with political connections have, on average, a lower performance of 14.1% and 12.5% in the first and the second government periods, respectively, when compared with their non-connected peers. This finding suggests that performance is even more distorted in the first-government period, which encompassed military dictatorship, than in the second-government. Our finding contradicts the hypothesis (2), which asserts that connected firms have better performance in the first-government.

Regarding the effect of firm control variables, results are generally similar to those shown in Panel A with the exception of foreign ownership and leverage. Firm's foreign ownership is an important predictor of performance only in the second-government period, whereas leverage is found to be negatively related to performance only in the first-government period.

It is critical to note that the size of coefficients on PC is greater in the estimations than those reported in other similar studies, such as in Fan *et al.* (2007). This difference in magnitude of coefficients may be attributed mainly to the different estimation techniques as the instrumental variable technique was employed, in contrast to earlier studies, which mainly used OLS regression. A large coefficient on the second stage is extremely common in 2SLS estimations, and is generally attributed to the fact that instrument is seen in 2SLS as a corrective to measurement error and thus leads to a larger substantive effect (Malesky, 2009). The value of adjusted R^2 ranges from 0.106 to 0.246, showing the satisfactory explanatory power of the estimated models. Several tests were conducted, which together provide support for our instrument choice. First, the Hausman test was implemented with the null hypothesis that regressor (leverage) is exogenous; that is, an OLS estimation of the same equation would yield consistent estimates. The significant p-values in all estimates suggest that OLS regressions that fail to control endogeneity problems would ultimately produce biased results. The relevance of the instrument may be readily tested by F-test for the joint significance of the instruments (Stock & Yogo, 2005). The statistics of F-test do not reject the hypothesis that the instrument is both relevant and significant. The Hansen-Sargan test of over-identifying restrictions is performed. The high p-values do not reject the joint hypothesis that the instruments are uncorrelated with the error. Such tests confirm the relevance of collateral as the instrument for leverage.

Taken together, the regressions in Table 5.4 suggest that political connections deter firm performance, which supports Hypothesis 1B. This suggests that political benefits are not translated effectively to improve performance. Furthermore, the deteriorating effect of political connections is even stronger in the first-government period, which is the opposite of what might have been expected on the basis of autocratic's notion (Hypothesis 2).

5.6.2 Impact of firm characteristics

In this section, the indirect effect of political connections is examined via firm-specific characteristics on the performance of connected firms. More specifically, based on earlier findings, whether or not the negative relationship between political connections and firm performance varies across firm groups is investigated in mind of size, ownership, and group affiliation. In order to examine this premise, we introduce three interactive terms in the baseline Model 1: PC×SIZE, PC×FOREIGN, and PC×BUS-GROUP and re-estimated the 2SLS and cross-sectional regressions. The coefficient, on a given interactive term, measures the way in which the relation between political connections and performance differ across the relevant firm characteristics. The estimated results are presented in Table 5.5.

Table 5.5: Impact of firm characteristics on connections-performance relationship

Independent Variables	Panel (A)		Panel (B)		Panel (C)	
	Entire period		First-government		Second-government	
	ROA	ROE	ROA	ROE	ROA	ROE
	(1)	(2)	(3)	(4)	(5)	(6)
<i>PC</i>	-0.281** (0.01)	-0.177** (0.02)	-0.168*** (0.00)	-0.129** (0.01)	-0.127** (0.01)	-0.116** (0.02)
<i>SIZE</i>	0.059** (0.03)	0.072* (0.08)	0.071** (0.04)	0.098* (0.07)	0.051** (0.02)	0.076** (0.04)
<i>LEVERAGE</i>	-0.137** (0.04)	-0.172*** (0.00)	-0.105 (0.16)	-0.114 (0.20)	-0.181 (0.11)	-0.168 (0.19)
<i>FOREIGN</i>	0.065 (0.51)	0.071 (0.44)	0.203 (0.56)	0.250 (0.38)	0.171 (0.58)	0.142 (0.47)
<i>BUS-GROUP</i>	0.076 (0.61)	0.103 (0.29)	0.031 (0.69)	0.026 (0.20)	0.092 (0.53)	0.108 (0.22)
<i>PC×SIZE</i>	-0.071** (0.02)	-0.056** (0.01)	-0.042** (0.02)	-0.068** (0.01)	-0.021** (0.03)	-0.036** (0.02)
<i>PC×FOREIGN</i>	0.059 (0.022)	0.071 (0.015)	0.129 (0.065)	0.187 (0.138)	0.090 (0.072)	0.063 (0.055)
<i>PC×BUS-GROUP</i>	0.109* (0.08)	0.183* (0.09)	0.081 (0.11)	0.101 (0.14)	0.058 (0.10)	0.047 (0.12)
<i>CONSTANT</i>	0.334*** (0.00)	0.270*** (0.00)	0.416** (0.03)	0.252*** (0.00)	0.301** (0.02)	0.382*** (0.00)
<i>Time dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Industries dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	2199	2199	1292	1292	907	907
<i>Number of Firms</i>	380	380	380	380	380	380
<i>R-square</i>	0.392	0.107	0.251	0.205	0.138	0.101
<i>F-statistics</i>	703.10	581.43	22.06	25.10	23.57	29.43
<i>Hansen-Sargan test (p-value)</i>	0.204	0.185	0.102	0.216	0.239	0.108

Panel (A) shows second-stage results of 2SLS regression results for the entire period (2002-2010). Panel (B) and (C) show the cross-sectional regression results for the first-government (2002-2007) and the second-government (2008-2010), respectively. The dependent variable in Panel (B) is measured in 2007, and the averages of the independent variables are measured over the period 2002-2006. Similarly, in Panel (C) the dependent variable is measured in 2010 and the averages of the independent variables are calculated over the period 2008-2009. The dependent variable in all regressions is return on assets (ROA) and return on equity (ROE). In the first-stage leverage is instrumented with collateral, defined as the ratio of tangible to the total assets, and all other independent variables used in the baseline model. F-test tests for weak identification. The Hansen-Sargan test is a test of overidentifying restrictions with the null hypothesis that instruments are valid. P-values, adjusted for heteroskedasticity, are in brackets. * Significant and 10%, ** significant at 5%, *** significant at 1%.

Column 1 and Column 2 in Table 5.5 report the results for ROA and ROE, respectively. The political connections variable maintains negative and significant relationships with both performance measures. The coefficients of the non-interactive variables for both performance measures remain materially the same as in Table 5.3 with the exception of the foreign ownership that loses statistical significance in both columns. Regarding the variables of interest, estimated coefficients on the interaction terms between size and political connections and business group and political connections are statistically significant. Consistent with the hypothesis, the negative coefficient on interactive term (PC×SIZE) suggests that firm size induces a negative impact on the performance of politically connected firms. This result may be interpreted as owing to substantial resources. Large firms are subject to high-level operational inefficiencies caused by politicians, which lead to poor performance. This result is in line with those garnered by Poyry & Maury (2010) and Jia *et al.* (2011). Following, the positive coefficient on (PC×BUS-GROUP) indicates that the performance of connected firms increases if they also belong to business groups. The result supports the interrelation of business groups and political connections, as shown by Khanna & Palepu (2000) and Khanna & Rivkin (2006), and the business group hypothesis.

The interactive effects of political connections are examined via firm characteristics in both government periods. Results are shown in Panel B and Panel C of Table 5.5. The inclusion of interactive variables in the performance equation does not affect the connection–performance relationship. In the case of both periods, political connections are negatively associated with performance in all four regressions, supporting our earlier findings. Next, the estimated coefficients on the control variables are seen to be statistically insignificant, with firm size the only exception, which still has a significant positive impact on performance in both periods. Regarding the indirect effect of political connections, only estimated coefficients on

interaction terms between political connections and size (PC×SIZE) are statistically significant in the case of both periods. This evidence suggests that large firms are subject to more political interferences than small firms; this effect is more pronounced in the first-government period. Largely, there is no support in either period for the hypotheses, stating business grouped and foreign-owned firms demonstrate better performance.

In all regressions, the statistics of the F-test of the joint significance of estimated coefficient does not reject the hypothesis that the instrument is relevant and significant. Furthermore, the Hansen-Sargan test of over-identifying restrictions does not reject the null hypothesis that our instruments are uncorrelated with the residuals of the regression.

5.6.3 Further analyses

Growth opportunities and firm performance

The effect of growth opportunities on firm performance has been discussed widely (see e.g. Gaver & Gaver, 1993; Pilotte; 1992; Gay & Nam, 1998). Prior studies, such as those by Chow *et al.* (2011) and Smith & Watts (1992) have found that firms with substantial growth opportunities have greater information asymmetry mainly owing to the intangibility of their assets; therefore, generally, there is a low level of leverage. Following this argument, it may be posited that high-growth firms that rely less on debt financing, in fact, are less dependent on political connections⁶². Consequently, the involvement of politicians in the financing policy of connected growing firms will be limited, and thus the performance of firms tends to be less deterred (in our case).

⁶² As discussed earlier in section 5.3, empirical evidence suggests that political connections matter most through preferential access to finance.

In order to investigate this premise, following Belghitar *et al.* (2011) and Dessi & Robertson (2003), the sample is divided into three groups based on the firm's price–earnings ratio. More specifically, the firms sampled are arranged in an ascending order based on the average price–earnings ratio for the period 2002–2010, with the upper 40% representing high-growth firms, the lower 40% representing low-growth firms, whilst the remaining middle 20% of the firms were dropped. A similar estimation exercise is carried out for both sub-samples (based on growth opportunities), with the results obtained presented in Table 5.6. Column 1 and Column 2 report the results for ROA, and columns 3 and 4 present the results for ROE. A number of interesting results were established. For both measures of performance, the coefficient on high-growth firms was found to be positive and significant, therefore indicating that political connections exert a positive impact on the performance of firms with more growth options. However, the magnitude of coefficient and statistical significance is higher for ROE. Results support this prediction owing to less dependence on debt; the performance of growing firms is not distorted by connected politicians. In contrast, the performance of low-growth firms shows an inverse relationship with political connections, thereby inferring that political connections distort performance. Regarding firm characteristics, notably, the magnitude of leverage with a negative sign on high-growth firms is almost twice as large as on low-growth firms, therefore showing less dependence of growing firms on debt. Taken together, the overall results suggest that politicians channel excessive capital into their private benefits in low-growth connected firms more often, whilst for firms with high-growth opportunities, political favours reflect in their performances.

Table 5.6: Further analyses

Independent Variables	Growth opportunities		Growth opportunities		Alternative measure of performance	Heckman two-stage analysis			
	ROA		ROE			ROA	ROE	ROA	ROE
	High growth	Low growth	High growth	Low growth	Tobin's Q				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>PC</i>	0.042**	-0.127**	0.055*	-0.168**	-0.141**	-0.152**	-0.136***	-0.260**	-0.194**
	(0.02)	(0.01)	(0.06)	(0.01)	(0.03)	(0.04)	(0.00)	(0.03)	(0.01)
<i>SIZE</i>	0.065**	0.141*	0.088*	0.102*	0.136*	0.041**	0.075**	0.086*	0.105*
	(0.04)	(0.09)	(0.07)	(0.08)	(0.05)	(0.03)	(0.02)	(0.05)	(0.09)
<i>LEVERAGE</i>	-0.239*	-0.126***	-0.068*	-0.052**	-0.081*	-0.097*	-0.082**	-0.124***	-0.101***
	(0.06)	(0.00)	(0.09)	(0.01)	(0.07)	(0.06)	(0.04)	(0.00)	(0.00)
<i>FOREIGN</i>	0.080***	0.094**	0.020	0.047	0.165**	0.108	0.135	0.169	0.185
	(0.00)	(0.04)	(0.16)	(0.12)	(0.03)	(0.10)	(0.11)	(0.12)	(0.21)
<i>BUS-GROUP</i>	0.103	0.055	0.071	0.060	0.130	0.041	0.053	0.032	0.060
	(0.98)	(0.92)	(0.83)	(0.074)	(0.64)	(0.20)	(0.17)	(0.46)	(0.37)
<i>PC×SIZE</i>								-0.095***	-0.78*
								(0.00)	(0.06)
<i>PC×FOREIGN</i>								0.082	0.055
								(0.22)	(0.13)
<i>PC×BUS-GROUP</i>								0.202	0.284
								(0.43)	(0.17)
<i>Inverse Mills ratio(λ)</i>						0.061	0.096	0.072	0.118
						(0.19)	(0.41)	(0.35)	(0.52)
<i>CONSTANT</i>	0.403***	0.367**	1.18**	2.019***	0.351***	0.341***	0.296***	0.457***	0.362***
	(0.00)	(0.02)	(0.04)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

<i>Time dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Industries dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	908	842	2199	2199	2199	2199	2199	2199	2199
<i>Number of Firms</i>	152	152	380	380	380	380	380	380	380
<i>R-square</i>	0.115	0.274	0.193	0.146	0.394	0.271	0.304	0.209	0.192
<i>F-statistics</i>	460.03	215.41	178.92	156.03	682.44				
<i>Hansen-Sargan test</i>	0.112	0.248	0.091	0.174	0.236				
<i>(p-value)</i>									

The columns 1-5 report the second-stage results of 2SLS regressions. The columns 6-9 report the second-stage results from the Heckman selection model. The columns (1-4) include the subsample of the high growth and the low growth firms. The dependent variable in columns (1&2) is return on assets (ROA) whereas return on equity (ROE) is used as dependent variable in columns (3-4). Column (5) employs Tobin's Q as a dependent variable. In columns 1-5, leverage is instrumented with collateral in first-stage regression, defined as the ratio of tangible to the total assets, and all other independent variables used in the baseline model. F-test tests for weak identification. The Hansen-Sargan test is a test of over-identifying restrictions with the null hypothesis that instruments are valid. The inverse Mills ratio is obtained from the probit regression (first-stage of Heckman selection model). P-values, adjusted for heteroskedasticity, are reported in brackets. * Significant and 10%, ** significant at 5%, *** significant at 1%.

Tobin's Q as a measure of firm performance

There has been considerable criticism of the use of accounting measures of performance (Wernerfelt & Montgomery, 1988; Lubatkin & Shrieves, 1986). This critique is based mainly on the failure of accounting measures to consider differences in systematic risk, temporary disequilibrium effects, and future growth potentials. Consequently, it is argued that such measures capture only changes in firm value—not levels of value. For this reason, in our analysis, the main findings are re-estimated with a widely used market-based measure—Tobin's Q—as a dependent variable. Results are presented in Table 5.6. As shown in Column 5, the qualitative results remain largely unchanged; the coefficient on political connections is still negative and statistically significant. The magnitude of coefficient is lower (0.141) than the earlier finding (0.236); however, the evidence of an inverse relationship between the political connections and performance still remains. Overall, consistent findings suggest the robustness of the results in regard to the market measure of performance.

The Heckman two-stage approach

There is a possibility that standard regression techniques might not control for the endogeneity bias stemming from self-selection linked with examining the performance-connection relationship. One possible way to control such self-selection bias is through Heckman's two-stage approach (Heckman, 1979). This method allows rectifying some econometric issues traditionally coupled with the estimation of the corporate connections effects like sample-selection bias and endogeneity. In the first stage of this model, the technique estimates the selection equation as a probit model to capture the propensity to be politically active, which consequently yields the Inverse Mills ratio. Later, in the second stage, standard regression is used to investigate the effect of political connectedness on performance. More specifically, the selection equation (first stage equation) has PC

dependent variable and all control variables from the regression equation (1) are used as independent variables. In addition, following Boubakri (2009), Agrawal & Knoeber (2001) and Bertrand *et al.* (2007), the firm's location is selected as a discerning variable (instrument) of political connections. Firm location takes value 1 if firm is located in the two largest cities of Pakistan, namely, Lahore and Karachi. Second stage equation (corrected regression equation) is the same as equation (1), except we incorporate the Inverse Mills ratio obtained from the selection equation.

We estimate the basic performance model using ROA and ROE as dependent variables and report the results in columns 6-7 of Table 5.6. In column 6, we find that inverse Mills ratio is statistically insignificant for both measures of performance. Importantly, the main findings for the effects of political connectedness on performance remain unaffected. In particular, the noteworthy difference is that the coefficients on PC for ROA and ROE become smaller in an absolute sense; however they maintain the same sign with statistical significance as in the earlier estimations. Regarding control variables, it is found that these variables follow the similar pattern as reported in earlier specifications. Overall, the basic results support the competing hypothesis (1B) which asserts that the negative impact of political connections on firm performance is robust to potential sample selection bias.

Similarly, we address the potential endogeneity concern in the subsequent estimation capturing the impact of firms' characteristics through employing Heckman two-step procedure. Said alternatively, we re-estimate the specification reported in Table 5.5 after accounting for sample selection bias. In doing so, we follow the same Heckman two-stage routine as outlined above. Results are shown in columns 8-9 of Table 5.6. Results demonstrate that our main findings are not affected by sample selection bias. As it can be

seen, the inverse Mills ratio is not significant in any cases indicating the absence of sample selection bias. Once again, the coefficients of the political connections indicator (PC) in both columns 8 & 9 maintain the significant negative sign. Regarding interactive variables, essentially, the coefficients for PC×SIZE in both estimations remain significant and keep pointing in the expected directions. In terms of magnitude, these coefficients become larger in an absolute sense as compared to earlier results. In nutshell, the findings indicate that the large firms are subject to more political interventions which subsequently cause poor performance as compared to their small counterparts. The remaining interactive variables are found statistically insignificant as in the earlier estimations. Taken together, our results provide evidence that after accounting for unobserved information which leads firms to establish political connections, there is still large effect of firm size in shaping the influence of political connections on performance.

5.7 Conclusion

This paper addresses the question of whether or not political connections translate into better firm performance. We hypothesise that accumulated benefits from connections should be reflected in the performance of connected firms; thus, better performance is expected from such firms. In an attempt to test this main hypothesis, firm-level data from Pakistani-listed firms is utilised over the period 2002–2010. In contrast to our predictions, our results find that political connections have a negative effect on firm performance a result that is robust to specification tests. Interestingly, this negative impact of political connections is more pronounced in the first-government period (military dictatorial regime). This provides evidence of managerial inefficiencies and rent-extraction by affiliated politicians, which relates to differences in the political set-up of government terms.

As an extension, the role of growth opportunities is examined in relation to determining the impact of political connections on firm performance. Consistent with the hypothesis, the results suggest that the performance of those firms with more growth opportunities is not distorted by political connections. Subsequently, the effects of firm characteristics on the performance of connected firms are examined. As a result, we find that large firms are subjected to more severe performance distortions than their small counterparts. Moreover, group-affiliated connected firms have better performance than those without group-affiliation.

Overall, such results lend support to the crony capitalism view that Pakistani firms channelise political benefits capital into their private gain and subsequently perform poorly, which, in turn, casts doubts on the efficacy of institutional reforms the Pakistani government has undertaken with the aim of curbing political corruption.

CHAPTER 6: POLITICAL INTERVENTION AND FIRM OPERATIONAL INEFFICIENCIES—EVIDENCE FROM A DEVELOPING COUNTRY

6.1 Introduction

Although political intervention in business is not unique to Pakistan but rather is based on the evidence provided in Chapter Five, which notably shows the poor performance of politically connected firms, induce us to further investigate the possible implications of the business–politicians nexus. The effect of political connections on firm performance is well recognised. Anecdotal evidences have highlighted that firms secure benefits from connections with politicians that may be translated into better performance (Fisman, 2001; Li *et al.*, 2009; Driffield *et al.*, 2007; Johnson & Mitton, 2003). A common impression is that political connections are important for operational efficiencies⁶³, particularly in less developed markets (Chen *et al.*, 2011). However, some research studies have provided contrary evidence that political connections distort the performance of affiliated firms (Faccio, 2006; Boubakri *et al.*, 2008; Dombrovsky, 2008). The common justification for the poor performance of connected firms is the ‘political cost’, i.e. the costs associated with the control of the firm by a politician with political objectives that differ from economic efficiency (Bai *et al.*, 2010). Although these studies agree on the political intervention in corporate operations as a reason for underperformance, the mechanism of such interventions has generally been overlooked. Hence, the channels through which such interventions are carried out and which ultimately lead to operational inefficiencies and poor performance is an issue worthy of future research.

⁶³ Operational efficiency is the ability of a firm to produce its products in the most cost-effective manner possible while still ensuring the high quality of its products. In the current context, firms establish political connections to reduce the cost of resources required in production.

Chapter Five provides empirical evidence to support that political intervention distorts the performance of connected firms. The negative effect of political connections on firm performance provides the motivation to investigate this relationship a step further, and further attempts to reveal the channels through which politicians interfere and distort the performance of connected firms. In order to investigate this premise, two possible operational inefficiencies that political interventions may cause are proposed: the investment inefficiency and the excess employment. The former approach is based on the argument that self-interested politicians intervene in the investment decisions of the affiliated firm to benefit themselves. Moreover, the preferential access to external finance further exacerbates the tendency of connected firms to engage in inefficient investments motivated by political objectives (Chen *et al.*, 2011). On the other hand, the latter approach rests on the argument that connected politicians impose objectives on affiliated firms that would help them to maximise electoral support (Bertrand *et al.*, 2007). Such objectives generally appear in a demand of excessive employment in the company.

Our empirical strategy consists of studying differences in investment efficiency and employment size at connected firms compared with other firms that are not politically connected. A central assumption underlying the empirical approach is that both investment inefficiencies and politically motivated employment favours (excess employment) induce a direct negative effect on firm performance. Following the literature on corporate investment theory (Chen *et al.*, 2011; Bushman *et al.*, 2007), the sensitivity of investment expenditure to investment opportunities is employed as a measure of investment efficiencies. The intuition underlying is straightforward: the firm managed efficiently (inefficiently) should invest relatively more (less) in response to its available investment opportunities. With regard to employment size, it is argued that if a politician intervenes in the firm's employment

decision, then the connected firm should have more employees, *ceteris paribus*, and consequently show lower employee productivity than non-connected firms (Bertrand *et al.*, 2007). Thus, employee productivity is used as an indication of excess employment in a firm⁶⁴.

We draw on a sample of 2,199 Pakistani firm year observations over the period ranging 2002–2010 to test the relationship between political intervention and efficiency of business operations⁶⁵. The results show that the sensitivity of investment expenditure to investment opportunities is weaker for connected firms, therefore confirming the hypothesis of investment inefficiencies caused by political interferences. Surprisingly, political intervention is found to be significant for investment (allocation) efficiency, but not necessarily for the level of investment expenditure. Subsequently, the negative correlation of employee productivity, with political connections, supports the hypothesis that excessive employment is one of the channels of political intervention. It is worth mentioning that the effect of interference is more pronounced for employment decisions. This finding may be attributed to the fact that a substantial fraction of the connected firms in Pakistan are located in the constituencies of connected politicians, which suits politicians in terms of transferring rents to their constituents in the form of employment favours⁶⁶. Moreover, considering that unemployment is regarded as a major social problem in Pakistan, and also under the assumption that voters are myopic, we may assert that voters' support binds with such employment opportunities. Accordingly, in order to maximise electoral support in electoral

⁶⁴ We restrict ourselves only to observe altered employment size as an outcome of political interference. Unfortunately, the unavailability of data did not allow us to examine politically motivated hiring of inept employees that is also a significant aspect of political interference in employment decisions.

⁶⁵ Throughout this chapter we use terms 'operations' and 'activities' interchangeably which refers only to firm investment and employment decisions.

⁶⁶ Some examples of firms that locate in the constituency of their connected politicians are provided in the discussion section 6.5.1.

districts, politicians are required to provide employment opportunities to their supporters. The findings show strong evidence of ‘clientelism’ in the Pakistani economy where politicians distribute job favours in exchange of electoral support.

Moreover, whether the political intervention relates to growth opportunities available to firms is also examined. The findings support this conjecture, and further illustrate that connected firms with high growth opportunities experience political interference less often than their peers with low growth opportunities. Furthermore, whilst investigating the cross-industry variations in economic inefficiencies, the results suggest that industries with a high proportion of politically connected firms are potentially more subject to political intervention in terms of investment inefficiencies and excessive employment. The results suggest that, although the frequently cited industry-specific characteristics (discussed later in Section 6.5.3) have sufficient explanatory power for inter-industry differences, the sectoral extent of political connectedness is nevertheless an important determinant that shapes business decisions across industries. Thus, this facet must be taken into account in the corporate finance literature examining cross-industry heterogeneity. In addition, we also find an indirect link between political intervention and operational efficiencies through firm size and ownership. The main results are robust to industry-adjusted measures of investment, growth opportunities, and employment productivity. Lastly, a sense of economy-wide costs caused by political intervention is provided, with the estimation that an additional 0.19% of GDP is lost each year as a result of such political distortions in employment decisions.

This chapter relates to two main strands of literature: first, it adds further evidence to the new and growing literature on the implications of political connections (see, e.g., Fraser *et al.*, 2006; Yeh *et al.*, 2012; Boubakri *et al.*, 2008); and second, the chapter is also related to the

literature on corporate investment and, more specifically, on the agency problem (see, for example, Jensen, 1986; Childs *et al.*, 2005; Hirth & Uhrig-Homburg, 2010). The results suggest that political influence acts as another friction that averts firms from making optimal operational decisions. The agency problem is manifested through collusion between politicians and shareholders in operating business activities. On a practical level, the priorities of politicians do not necessarily coincide with those of shareholders; therefore, in contrast to the wealth maximisation objective of shareholders, politicians want management to support their objectives, such as through investing in dictated (inefficient) projects and excessive employment. The chapter is most closely related to the work of Chen *et al.* (2011), who argue that political intervention distorts firms' investment behaviour and ultimately leads to investment inefficiency; however, the work does not study the way in which political interference may impact corporate employment decision, which is a central feature of this analysis.

Taken together, this study contributes to the literature in several ways. Firstly, it identifies and demonstrates the channels through which political connections affect the firm's economic decisions. By showing this, it adds another dimension to the understanding of political connections in general and in developing countries in particular. Secondly, to our knowledge, this study is amongst the first aiming to examine more than one channel of political interference in analysis. Thirdly, the results provide empirical evidence, which shows political connections as being an important determinant of the cross-industry heterogeneity, thus enhancing understanding of the cross-industry variation. Finally, our study contributes to the corporate investment literature that is based mainly on standard corporate finance theories, such as Trade-off theory, Pecking order theory, and Agency cost theory (Heinkel, 1982; Shyam-Sunder & Myers, 1999; Hoshi *et al.*, 1991). However, we find

that political forces play a significant role in the investment decisions of the firms; thus, the inclusion of the political aspect is needed to be considered whilst examining the corporate investment behaviour.

The remainder of this chapter proceeds as follows: Section 6.2 describes the theoretical background and develops hypotheses to be tested in this chapter; Section 6.3 provides details of the research methodology; the dataset employed in the empirical analysis is described in Section 6.4, whilst Section 6.5 presents our main empirical results; finally, Section 6.6 concludes the chapter.

6.2 Theoretical framework and hypotheses development

From the standpoint of political economy literature, the impact of political connections on firm performance may be twofold: first, through direct influence on the firm's economic cost; and, second, through altering the set of growth opportunities. The former channel is usually considered even more important. A distinct stream of studies on political connections observes those effects, and mostly provides evidence of a positive impact on firm performance (Li *et al.*, 2008; Braggion & Moore, 2011; Niessen & Ruenzi, 2010). However, in sharp contrast, some studies do not observe improved performance of the connected firms. For instance, Bertrand *et al.* (2007) report that French firms connected to government officials display higher rates of employment but lower performance. Dombrovsky (2008) finds that Latvian firms connected only to winning parties experience better performance. Likewise, in the context of Italy, Asquer & Calderoni (2011) find that connections with ex-politicians have no effect on firm performance. In an event study, Fisman *et al.* (2006) investigated the stock market reaction on news—both negative and positive—relating to the former Halliburton's CEO and US Vice President Richard Cheney, and accordingly

documents that the return of firms—including Halliburton, connected to Richard Cheney—are unaffected by events that would credibly impact the value of any such connections. In a cross-country study, Faccio (2006) shows that, besides the considerable political benefits, connected firms underperform in comparison with non-connected firms on an accounting basis. Finally, Fan *et al.* (2007) find that politically connected Chinese firms underperform in comparison with those without political connections in three years post-IPO performance.

In principle, inferior performance implies that the cost of connections outweighs the benefits. The cost of connections stems mainly from the political intervention in business activities that cause the firm to deviate from its profit-maximisation objective⁶⁷. The analysis of Shleifer & Vishny (1994) highlights that self-interested politicians utilise their power to intervene in connected firms for their own objectives. As a consequence, managers of connected firms pursue strategies that satisfy the political objectives of connected politicians, which undermine overall operational efficiency and accordingly distort performance.

Excess employment is one potential source of performance distortion. Politicians have an incentive to intervene in the operations of connected companies to maintain political support through offering their constituents employment. On the other hand, such surplus employment increases the cost and diminishes the profitability of connected firms. Bertrand *et al.* (2007) observe that the presence of political directors on the Board significantly increases the level of excess employment in the firm. Said differently, market forces encourage firms to reduce the excess employment level so as to enhance economic performance, whilst politicians

⁶⁷ Though cost of political connections also includes the cost of political donation, gifts, and bribes but we confine ourselves only to *ex post* cost of political connections.

desire the maximisation of their political support by maintaining high employment levels, which subsequently result in deteriorated firm performance.

Firms with political ties are also forced to undertake inefficient investments, which serve as a tool for the private enrichment of politicians. The theory of corporate investment suggests that wealth-maximisation aim encourages a firm to invest according to the net present value principle (Chen *et al.*, 2011). However, political intervention inexorably alters the objective function of connected firms to that preferred by the politician, thus leading to investment inefficiencies in two main ways: *ex ante*, where connected firms most likely forgo profitable investment opportunities to follow political objectives; and *ex post*, if investment fails to produce the expected outcomes, connected firms find it difficult to either terminate the unsuccessful project or cut their investment because of conflicts with political objectives. The negative impact of political interference on investment efficiency may become further exacerbated by preferential access to credit of connected firms (Chen *et al.*, 2011). Based on prior research, there is considerable evidence to believe that connected firms have easy access to credit in all countries (Yeh *et al.*, 2012; Faccio, 2010; Claessens *et al.*, 2008; Goldman *et al.*, 2009), as well as in Pakistan (Khwaja & Mian, 2005), which may intensify the investment inefficiency problem. Importantly, the reason behind why firms continue to perform inefficient economic activities—without facing the threat of bankruptcy—lies in the fact that connected politicians will bail the firm out with the use of public budget since it is valuable for politicians to keep such firms alive so as to continue to extract political and other benefits.

In addition, the argument may also be motivated for operational inefficiencies with Agency theory, which predicts the moral hazard problem between managers and shareholders. The classic principal agent problem (Jensen, 1986) fits well in this context since managers pursue

political objectives that may be in conflict with those of outside shareholders. Empirical evidence shows managerial sub-optimal decisions as being substantial (Hainmueller & Eggers, 2011; Blanchard *et al.*, 1994). In a recent study, Aggarwal *et al.* (2012) discussed agency problems in a different but related context, and argued that political connections are the manifestation of an agency problem between managers and shareholders, with contributions for establishing political connections correlated with weaker governance and unobservable to shareholders, which may accordingly instigate agency problems. Taken together, such theoretical and empirical considerations generate testable predictions relating to the firm's operational decisions that may ultimately harm shareholder value. Therefore, in this study, we investigate whether political intervention in connected firms signifies another friction and thus accordingly averts firms from making optimal operational decisions.

Based on foregoing arguments, it is predicted that, as a result of political intervention, connected firms may follow inefficient strategies, such as inefficient investments and excess employment, both of which ultimately distort firm performance. In order to provide empirical content to this statement, it is hypothesised that:

Hypothesis 1: Political intervention causes investment inefficiency amongst connected firms, i.e. investment efficiency is negatively related to political connections.

Hypothesis 2: Political intervention causes excess employment amongst connected firms, i.e. excessive employment is positively related to political connections.

Further hypotheses

Firm growth opportunities and operational efficiencies

A glut of studies show that the effects of financial market imperfections are more pronounced on high-growth firms (i.e. Ozkan & Ozkan, 2004; Gaver & Gaver, 1993). These studies rest their argument on the fact that growing firms hold most of their value in growth opportunities available to them which have little or no collateralisable net worth. The lack of collateralisable assets causes them additional cost on external financing. As a result, such growing firms with insufficient collateralisable assets are likely to forgo investment opportunities with positive net present value. To overcome this problem, such firms adopt policies with aim to mitigate underinvestment problem. These policies mainly include paying fewer dividends to increase the level of internal capital and reliance on internal capital rather than leverage (Chow *et al.*, 2011). Having said that growing firms depend less on leverage, we may argue that such firms are less likely to rely on political connections and consequently their business operations are less likely to have intervention by politicians. Thus, it may be hypothesised that business operational efficiencies of high-growing firms are not deteriorated to a similar extent as low-growth firms. Formally we may state that:

Hypothesis 3: Politically connected firms with more growth opportunities have higher operational efficiencies (investment and employment) than connected firms with less growth opportunities.

Firm size and operational efficiencies

According to Rajan & Zingales (1995) large firms have better access to financial resources mainly because large firms provide more information to lenders and have lower bankruptcy costs and operating risk. In addition, as Fama & Jensen (1983) argue that large firms are more diversified and therefore, less prone to bankruptcy. All these characteristics of large firms mostly appear in the form of better performance (Tezel & McManus, 2003). From the

political standpoint, such substantial resource base and better performance make large firms a gratifying target of political exploitation. As Poyry & Maury (2010) argue that large firms are more likely to suffer political interventions owing to the fact that such firms are lucrative target of political patronage than firms lacking such resources. Resting on this argument we may hypothesise that large politically connected firms experience more political interferences and suffer investment and employment inefficiencies at larger extent as compared to small firms. The testable hypothesis is as follows:

Hypothesis 4: Large politically connected firms have lower operational efficiencies (investment and employment) than small connected firms.

Financial resources and operational efficiencies

Earlier literature shows that firms with better financial resources are able to accumulate political connections and accordingly extract more political rents out of these links. For instance, Faccio (2006) and Fraser *et al.* (2005) indicate that political connections are more widespread amongst firms with large financial resources. Moreover, firms with sufficient financial resources possess not only advance technology, proficient human capital and better management, but also the ability to influence policy decisions (Girma *et al.*, 2005). Thus, firms with such resources become appealing to politicians for rent-seeking practices. Consequently, the operational efficiencies of these firms tend to be lower than firms lacking large financial resources. In order to test this prediction, we may hypothesise as:

Hypothesis 5: Politically connected firms with more cash flow have lower operational efficiencies (investment and employment) than connected firms with low cash flow.

Hypothesis 6: Politically connected firms with more leverage have lower operational efficiencies (investment and employment) than connected firms with low leverage.

6.3 Empirical strategy

The aforementioned hypotheses are tested alongside two independent empirical models. The first model seeks to test the inefficiencies stemming from political intervention in the firm's investment decisions, whilst the second model estimates the effects of political intervention on employment decisions.

Investment inefficiencies

Theoretically, investment efficiency refers to firms undertaking all and only investments with positive net present value (Arnold, 2007). According to Tobin (1969), in a perfect capital market, firm investment should relate positively to its growth opportunities; however, in the presence of the frictions of the real world, such as agency costs and information asymmetry, firm investment does not respond adequately to available growth opportunities. Numerous empirical studies have tested the implications of such market frictions on firm investment decisions; nevertheless, growth opportunities have commonly remained a determining construct in these analyses (Bushman *et al.*, 2007; Hayashi, 1982; Blundell *et al.*, 1992).

Consistent with this strand of literature, the sensitivity of investment expenditure to investment opportunities is also employed as our measure of investment efficiency. The underlying intuition is that the firm managed efficiently (inefficiently) should invest relatively more (less) in response to its available investment opportunities. Bushman *et al.* (2007) employ Q theory as a basis for estimating investment efficiency. More specifically, they assume that the relationship between investment expenditure and investment

opportunities can be estimated through a piecewise linear function which permits slopes on expanding and contracting investment opportunities to change. In estimation model, investment response to change in investment opportunities is captured, subsequently; impact of control variables such as financial institutions and accounting practices on investment sensitivity to changing growth opportunities is captured. In the same spirit, we capture the impact of political connections on the sensitivity of investment to changing investment opportunities. In this regard, the political connection is tested as a source of inefficiency. Following this intuition, the testable Hypothesis 1 may be stated as: *ceteris paribus*, the sensitivity of investment expenditure to investment (growth) opportunities is lower in politically connected firms compared with non-connected firms. The empirical approach closely follows that of Chen *et al.* (2011), Bushman *et al.* (2007), and Hung *et al.* (2007). Technically, the following econometric specification is utilised:

$$INVESTMENT_{it} = \alpha + \beta_1 GROWTH_OPP_{it} + \beta_2 PC_{it} + \beta_3 GROWTH_OPP_{it} * PC_{it} + \beta_4 CF_{it} + \beta_5 SIZE_{it} + \beta_6 LEVERAGE_{it} + YearDum + IndDum + \varepsilon_{it} \quad (1)$$

where the dependent variable INVESTMENT is the investment expenditure of a firm's i in year t . It is measured as expenditure to acquire fixed assets, proxied by change in fixed assets between year $t-1$ and t plus depreciation in year t , and divided by total assets in year t .⁶⁸ The explanatory variables of interests are PC and GROWTH-OPP, where the former is a dummy variable indicating the firm's political connections, whereas the latter indicates the growth opportunities available to a firm. Growth opportunities, unlike Bushman *et al.* (2007), are measured by price earnings ratio. This indicator of growth opportunities rests in the fact that

⁶⁸ This definition of investment expenditure is commonly used in corporate investment studies such as Poncet *et al.* (2010); Ratti *et al.* (2008); Bhaduri (2006); Athey and Laumas (1994); Becker and Sivadasan (2006); and Koo and Maeng (2005).

it shows the expected value of future profit of a firm; therefore, a higher price earnings ratio shows high growth opportunities. In addition, as price earnings is given by the ratio of the price that investors are willing to pay to buy a share and earnings per share, the market's prices thus predict the firm's potential growth opportunities, and the stock market capitalises its present value (Kumar & Hyodo, 2001). Hereafter, we refer to the specification in Equation 1 as the investment efficiency model.

Control variables for investment were selected on the basis of the results of earlier empirical studies or of the surveys thereof (see, for example, Schiantarelli, 1995). We include three control variables in the model, all of which may be seen to influence investment. First, cash flow is included in the model as it has been used in numerous studies as a determinant of a firm's investment, such as in the case of Fazzari *et al.*, (1988) and Harris *et al.*, (2000), who found that internal capital has a significantly positive influence on the level of investment in Indonesian firms. Intuitively, large operating cash flows provide a firm with financial resources for investment; therefore, it is anticipated that there will be a positive coefficient for (CF). Second, the variable (SIZE) is employed in order to control firm size effect. As per prior studies (Gelos & Werner, 2002; Bond & Meghir, 1994), in the presence of non-trivial fixed costs of raising external finance, large firms have easier access to external financing, mainly owing to less information asymmetry with lenders, which that ultimately positively impacts their investment decisions. Size consideration may also affect access to political support because establishing political connections may require extensive *ex ante* costs, which large firms may easily afford. Thus, a positive coefficient is expected for firm size. Third, firm leverage effect may be taken into account by including the variable (LEVERAGE). It is often argued that the degree of firm leverage may deter access to external capital, which ultimately influences investment. As the cost of leverage increases with debt ratio, *ceteris*

paribus, one may anticipate a negative relationship between leverage and investment. Investment decision may have time-specific and industry-specific heterogeneity, which are unobservable in estimation. In an attempt to control such unobservable effects, YearDum and IndDum are used for year and industry dummies, respectively. A detailed description of the variable measurement is provided in the next section.

In the investment efficiency model, β_1 measures the sensitivity of investment expenditure to investment opportunities, whilst β_2 captures the impact of political connections on the level of firm investment. Subsequently, the effect of political connections on investment efficiency by interacting the PC term with the proxy of growth opportunities GROWTH-OPP is examined. The coefficient on this interactive term β_3 would measure whether or not the sensitivity of investment expenditure to investment opportunities is affected by the firm's political connections. If political connections cause intervention in the investment decision, β_3 is predicted to be negative, which is consistent with investment inefficiency hypothesis.

Excess employment

As discussed earlier, connected politicians impose objectives, mainly in the form of excess employment, on affiliated firms against favours granted that would help them to maximise electoral support. If this is true, connected firms should have more employees, *ceteris paribus*, and lower employee productivity than non-connected firms. With this noted, we argue that profit per employee is a better indicator for excess employment owing to the belief that, if employment is value added, higher employment would increase profit, meaning that profitability and employment size would move simultaneously, and hence the variation in labour productivity would be smaller. On the other hand, if employment is not value added, employment size and profit would move in opposition, and variation in labour productivity

would be large. It is worth quoting the statement of Xu and Wang (1997); this relationship ‘looks like but cannot be interpreted as a production function, because the dependent variable is not value-added per worker but the average profits created by each employee’. Therefore, we use low labour productivity as an indication of excessive employment. To test this hypothesis, following Xu & Wang (1999) and Bartel & Harrison (2005), the following regression equation is implemented:

$$EMP_PROD_{it} = \alpha + \beta_1 PC_{it} + \beta_2 SIZE_{it} + \beta_3 GROWTH_OPP_{it} + \beta_4 CF_{it} + \beta_5 LEVERAGE_{it} + YearDum + IndDum + \varepsilon_{it} \quad (2)$$

The dependent variable (EMP_PROD) is employee (labour) productivity, which is measured as profit divided by the total number of employees. Profitability is the operating income plus accumulated depreciation of the firm i in year t . PC is a dummy variable used to distinguish politically connected firms from non-connected firms.

To control for the relationship between labour productivity and political connections, we use the same control variables that were employed earlier in the investment efficiency model. Industrial organisation literature supports the view that large firms have more cost-efficient and higher labour productivity than small ones, mainly owing to sufficient technological resources (Wakelin, 2001; Papadogonas & Voulgaris, 2005). However, in contrast, political economy literature argues that, since political connections are common amongst large firms, they are more likely to experience political interference in employment decisions (i.e. Fraser *et al.*, 2005). Owing to such conflicting theoretical arguments, *a priori*, no relationship is posited for firm size, and is thus left to be empirically determined from the analysis. In Equation 2, firm size is represented as SIZE. There is a general assumption in much of the

literature on the firm's productivity that growing firms are operationally more efficient than low-growth firms (Coad & Broekel, 2012; Baily *et al.*, 1996). The underlying reasons are the higher research and development activities, the usage of latest technology, specialised knowledge relating to production, and the efficient utilisation of human capital. Prior literature, such as that by Daveri (2002), argues that corporate employment size and productivity recently are largely influenced by the advances in information technology, which is a trait of growing firms. Accordingly, in this study, in an attempt to control the firm's growth effect, a variable (GROWTH_opp) is included in the specification.

In this way, one mechanism geared towards increasing labour productivity is to buy new equipment or invest in on-the-job training, which requires sufficient financial resources. Considering this aspect, a firm's financial capability is an important determinant of employee productivity, and thus a positive relationship may arise between them (Nunes *et al.*, 2011; Brush *et al.*, 2000). This positive association between leverage and labour productivity may also be rationalised through the Agency cost theory. According to Jensen (1986), a high level of leverage increases the likelihood of bankruptcy, and if this occurs, managers fare worse than owners. This coerces managers to increase the efficiency of the firm, and thus increase the labour productivity. Hence, following these arguments, a positive association is expected in our estimations. The financial resources are controlled in Equation 2 by employing two variables: cash flow (CF) for internal capital and leverage (LEVERAGE) for external finance. Finally, YearDum represents year dummies, IndDum represents industry dummies at the two-digit level of SIC, and ε is the error term.

The given model resembles the model used in the context of political connections studies of Bai *et al.* (2010) and Xu & Wang (1999). A negative (positive) coefficient, β_l , on PC would

be interpreted as indicating interference (no-interference) in firm employment. Hereafter, we refer to the specification in Equation 2 as the employment model.

Estimation technique

An important issue in performing panel analysis is the selection of the correct estimation methodology. For this purpose, Lagrangian Multiplier (LM) test is first performed (Breusch & Pagan, 1980), which tests for the presence of random effects⁶⁹. The null hypothesis is that the cross-sectional variance and time-series variance components are zero. If the null hypothesis is not rejected, the pooled OLS regression is appropriate. The chi-square statistics are reported along with the results in relevant tables, and are equal to 184.08 and 130.19, respectively, for investment efficiency and employment models. The results of LM test lead to the rejection of the null hypothesis for investment efficiency models at 5% level; however, for the employment model, the null hypothesis cannot be rejected. The results suggest that cohort effect is zero and pooled regression is appropriate for estimating the employment model, whilst the random effect model is suitable for investment efficiency model.

Although the above results indicate that the random effect model should not be discarded in favour of the investment efficiency model, it does not conclude that the fixed-effect model should be ruled out; therefore, the Hausman (1978) test is conducted in regard to the investment efficiency model so as to compare the fixed effect and random effect estimation techniques⁷⁰. The null hypothesis states that individual effects are uncorrelated with other regressors in the model. Moreover, if there is such a correlation (H_0 rejected), the fixed-effect model would be more appropriate. The results of the Hausman test could not reject the null

⁶⁹ Command xttest0 tells the statistics of LM test.

⁷⁰ We did not perform Hausman (1978) test for employment model, since the LM test results suggested that pooled regression is appropriate for employment model.

hypothesis, therefore implying that the random effects model outperforms the fixed-effects model. Thus, the random effects model is used to estimate the investment efficiency model⁷¹. In addition to the insignificance of the results, the fixed-effect model is not considered suitable to this study because our main variable of interest—political connections—is time-invariant, and is automatically dropped in the fixed-effect estimation.

Regarding the measurement of the employment model, there is the probability that residuals will be correlated across years within each firm in pooling regression, and standard errors can be biased and either over- or underestimate the true variability of coefficient estimates. Therefore, following related literature (Claessens, *et al.*, 2008; Khwaja & Mian, 2005; Dinç, 2005; Jayachandran, 2006), pooling regression is estimated with heteroskedasticity-consistent robust standard errors clustered at the firm's level⁷².

6.4 Data

Our firm-level data is taken from two sources. The OSIRIS, a commercial database supported by Bureau van Dijk, provided most accounting data. The sample utilised comprises listed non-financial firms over the period of 2002–2010. The study begins with 2002 as this is when the first election was held and the government was established. The data on politicians (reviewed in order to identify the firms with ties to politicians) has been obtained from the official website of Election Commission of Pakistan (ECP), which conducts elections for the

⁷¹ The adopted procedure to conduct Hausman test is as follows. First, we estimated a random effect model that treats the firm individual effects as a random draw from a zero-mean distribution assumed to be uncorrelated with the regressors. Second, obtained results are stored. Third, we estimated the fixed-effect model that uses only within-firm variation over time. The fixed effect procedure provides an unbiased estimate even if the individual effects are correlated with regressors. Fourth, we stored the fixed effects results. Finally, 'hausman fixed random' command tested the null hypothesis that regressors are uncorrelated with firm specific effects.

⁷² Studies examining the political patronage extensively employed pooled regression with robust standard errors clustered at the firm level. The recent studies include Poyry and Maury (2010); Bunkanwanicha and Wiwattanakantang (2009); Dombrovsky (2008) and Boubakri *et al.* (2008).

National and Provincial Assemblies⁷³. It maintains comprehensive information on national and provincial elections: including the candidates list with their full names, parties' positions, and electoral outcomes.

6.4.1 Sample selection and distribution

The sample includes non-financial listed firms from Pakistan for the period 2002–2010⁷⁴. The decision to restrict the sample to include only the non-financial sector is because the accounting treatment of revenue and profits for financial firms (banks, insurance and investment firms) is significantly different to that of non-financial firms. Rajan & Zingales (1995) argue that financial firms' leverage is affected significantly by explicit (or implicit) investor insurance schemes, such as deposit insurance. In addition, the capital structure of such firms is influenced heavily by regulatory requirements; therefore, it is not appropriate to compare the financing policies of such firms with non-financial firms. Another decisive factor put forward in the data selection criteria is that, for each firm, it is required that a minimum of two consecutive years' information be reported so as to assess the changes in the financing structure of the firm. Moreover, firms with missing values for the important variables are removed from the sample as well.

The firm-level information in the OSIRIS databases is available for approximately 419 non-financial Pakistani-listed firms. Following the application of the aforementioned selection criteria, an unbalanced panel of 2,199 firm-year observations on 380 firms left for the empirical analysis. Following, the list containing names of politicians (that participated in the 2002 and/or 2008 elections) obtained from the Election Commission of Pakistan is matched

⁷³ Data is available at the following URL: <http://www.ecp.gov.pk/>

⁷⁴ For the ease of readers, the some aspects of sample selection criteria and sample distribution are rewritten here in this chapter.

with the full names of firms' directors one by one. By so doing, 107 politicians were matched to firms' directors. No politicians were matched to more than one firm; therefore, 107 firms were identified as politically connected firms.⁷⁵ The politically connected firms in this sample account for 28%, whilst 72% are non-connected firms.

Table 6.1 presents the distribution of the sample across industries. The sample is distributed according to two-digit SIC, which categorises the sample into twelve sectors. Given the size of the sample, this distribution is too in-depth for the study; thus, following Aharony *et al.* (2010) and Campbell (1996), the two-digit SIC is re-classified to a narrower eight-industry category. The frequency distribution across industries is non-uniform. We have the most firms from Textiles & Trade industry (132), followed by Basic industries, including petroleum (67), and then Construction (58). Firms belonging to the first four industries comprise more than 80% of the total sample. Furthermore, Table 6.1 shows that the percentage of political connected firms is highest in the Textile & Trade industry (41%). This is followed by Food & Tobacco industry with 34% of connected firms⁷⁶.

⁷⁵ In order to avoid the human error, we conducted the matching of politicians with firm's board of directors by applying VBA programming code, which is available on request.

⁷⁶ For detailed discussion on industry classification see chapter-3, section 3.4. However, for the ease of readers here the first three columns in table 6.1 are reproduced.

Table 6.1: Firm distribution across industries

Industry	Two-digit SIC code	Number of firms	Politically connected firms	Non-connected firms
Food & Tobacco	1, 2, 9, 20, 21, 54	48	17 (34)	31 (66)
Basic industries including petroleum	10, 12, 13, 14, 24, 26, 28, 29, 33	67	13 (19)	54 (81)
Construction	15, 16, 17, 32, 52	58	10 (17)	48 (83)
Textiles & Trade	22, 23, 31, 51, 53, 56, 59	132	54 (41)	78 (59)
Consumer durables	25, 30, 36, 37, 39, 50, 55, 57	33	5	28
Transportation	34, 35, 38 40, 41, 42, 44, 45, 47	10	(15) 3 (30)	(85) 7 (70)
Services	72, 73 75, 76, 80, 82, 87, 89	11	2 (18)	9 (82)
Others firms	No specific SIC code	21	3 (14)	18 (86)
Entire sample		380	107	273

Percentage of the respective industry is in brackets.

6.4.2 Variable measurement

Following mainstream literature (Khwaja & Mian, 2005; Boubakri *et al.*, 2008; Faccio, 2010), a firm is defined as politically connected if it has a politician on its Board of Directors. A politician is defined as any individual who stood in the national or provincial election, held in 2002 and 2008. A politician's full name is matched to a firm's director and, if their full (first, middle, and last) name matches exactly, the firm is considered as a politically connected firm.

The dependent variable, INVESTMENT, is the ratio of the investment expenditure divided by the total assets, where investment expenditure is taken as the change in fixed assets between year $t-1$ and t plus depreciation in year t . It can be expressed as $\{(\text{Fixed Assets in year } t) - (\text{Fixed Assets in year } t-1) + \text{Depreciation } (t)\}/(\text{Total Assets in year } t)$. This definition

of investment is commonly used in corporate investment studies, such as those of Ratti *et al.* (2008), Becker & Sivadasan (2006), and Koo & Maeng (2005). The second dependent variable for measuring excessive employment, EMP-PROD, is defined as profitability scaled by the total number of employees, where profitability is the firm's net profit before interest and tax expenses in a given year. This measure of employee productivity is adopted from Xu & Wang (1999) and Bartel & Harrison (2005), who employ a similar measure for Chinese state-owned firms.

Based on prior studies, the following additional variables are utilised in this study: growth opportunities, cash flow, size, and leverage. The variable GROWTH-OPP represents a set of firms' growth opportunities and is measured as the price earnings ratio. CF is the cash flow of the firm, measured as operating income (net income before interest and tax) plus accumulated depreciation divided by the total assets. This measure is adopted by Laeven (2002) and Love (2003), both of whom used it to measure firms' dependence on internal capital for their investment outlay. SIZE refers to the firm size, and is defined as the natural log of total assets. Finally, LEVERAGE is measured by the ratio of the book value of a firm's total debt (short-term and long-term) to total assets. In order to avoid outliers and spurious inferences, we winsorise all variables at the top and bottom 5% of their respective distributions. For convenience, details of how the variables are constructed are provided in Table 6.2.

Table 6.2: Variable measurements

<i>Variables</i>	<i>Acronym</i>	<i>Definition</i>	<i>Source</i>
Investment	<i>INVESTMENT</i>	Ratio of the investment expenditure divided by the total assets, where investment expenditure is measured as the change in fixed assets between year t-1 and t plus depreciation	OSIRIS
Employee productivity	<i>EMP-PROD</i>	Ratio of profit before interest and tax expenses divided by total number of employees	OSIRIS
Growth opportunities	<i>GROWTH-OPP</i>	Price earnings ratio	OSIRIS
Political connections	<i>PC</i>	A firm is considered as connected if the firm has a politician on its board of directors and a politician is defined as any individual who stood in the national or provincial election, held in 2002 and 2008	OSIRIS and ECP*
Cash flow	<i>CF</i>	Net income before interest and taxes plus accumulated depreciation divided by total assets	OSIRIS
Leverage	<i>LEVERAGE</i>	Book value of a firm's total debt (short term and long term) to the total assets.	OSIRIS
Size	<i>SIZE</i>	Natural logarithm of the total assets	OSIRIS

* Official website of ECP (Election Commission of Pakistan) provides the list of individuals participated in previous elections since 1970.

6.4.3 Data description

The comparison of financing patterns and firms' characteristics between firms with and without political connections is presented in Table 6.3. Since the differences of used variables across connected and non-connected firms have already been discussed in Chapter Four and Chapter Five in sections 4.4 and 5.5 respectively, focus is directed exclusively to investment expenditure and labour productivity variables.

Table 6.3: Descriptive statistics for key variables

	<i>Total sample</i>				<i>Political Connected firms</i>				<i>Non-connected firms</i>				<i>Mean difference (t-statistics)</i>
	<i>Mean</i>	<i>St. Dev</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>St. Dev</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>St. Dev</i>	<i>Min</i>	<i>Max</i>	
<i>INVESTMETN</i>	0.54	0.39	0.11	0.92	0.53	0.41	0.07	0.92	0.58	0.40	0.11	0.91	1.04**
<i>EMP-PROD</i>	9.74	16.56	-12.74	12.30	6.03	16.11	-11.69	12.18	10.57	16.80	-12.74	12.30	4.32**
<i>TOTAL LEV</i>	0.64	0.25	0.22	1.26	0.67	0.24	0.22	1.26	0.61	0.25	0.23	1.25	-3.38***
<i>CF</i>	5.99	10.84	-13.92	12.43	4.27	9.82	-9.05	12.02	6.28	11.34	-13.92	12.43	4.51**
<i>SIZE</i>	6.30	0.66	5.15	8.22	6.33	0.61	5.15	7.59	6.28	0.68	5.21	8.22	-1.66*
<i>GROWTH-OPPOR</i>	8.16	5.78	0.93	11.46	8.28	5.88	0.98	11.46	8.10	5.73	0.93	10.21	-0.65
<i>PROFIT</i>	5.94	10.91	-13.72	11.85	4.39	10.26	-13.72	11.85	6.64	11.12	-7.94	9.85	4.44***
<i>EMPLOYMENT</i>	1.87	0.62	1.30	3.61	1.96	0.59	1.39	3.54	1.81	0.66	1.30	3.61	-2.06***

* Significant at 10%, ** significant at 5%, *** significant at 1%.

As expected, politically connected firms tend to have less investment expenditure than non-connected firms. More specifically, the average investment expenditure to total assets for connected firms is 0.53—smaller than the value for non-connected firms (0.58). The result is strongly significant at the 5% level. The low investment rate by connected firms may be an indication of investment inefficiencies. The result for excessive employment provides preliminary support for the second hypothesis. In particular, the mean ratio of the labour productivity of connected firms is approximately 6.03, whereas that of non-connected firms is 10.57, which indicates that connected firms maintain excessive employees; therefore, productivity per employee is low. It is worth mentioning that the labour productivity of connected firms is exacerbated by the fact that these firms tend to maintain large employment size and have poor performance, as evidenced in the last two rows of Table 6.3, compared with non-connected firms, which further reduces productivity per worker. This preliminary investigation offers some degree of support for the conjecture of operational inefficiencies in connected firms.

6.5 Empirical results

6.5.1 Impact of political connections on firms' activities

In this section, the effects of political intervention on investment are investigated, as well as on employment decisions.

Investment efficiency

Table 6.4 presents the random effects regression results of the investment inefficiency model, taking investment expenditure as a dependent variable. Recall that the sensitivity of investment expenditure to available growth opportunities is utilised as a measure of investment efficiency. Furthermore, our variable of interest, PC, is included in order to test

the impact of political connections on investment efficiency. In particular, this key variable interacts with the sensitivity of investment expenditure to growth opportunities to measure the effect of political intervention in investment decision. For a robustness check, the estimations are run both with and without the firms' control variables. All models include year and industry fixed effects which, for the sake of brevity, are not reported. The overall R^2 shows the satisfactory explanatory power of the estimated model.

Table 6.4: Impact of political connections on investment efficiencies

Independent Variables	(1)	(2)
<i>GROWTH-OPP</i>	0.131*** (0.00)	0.104*** (0.00)
<i>PC</i>	0.023 (0.15)	0.011 (0.16)
<i>PC * GROWTH-OPP</i>	-0.052** (0.04)	-0.043** (0.003)
<i>CF</i>		0.039 (0.85)
<i>SIZE</i>		0.293* (0.05)
<i>LEVERAGE</i>		-0.009** (0.01)
<i>CONSTANT</i>	0.209*** (0.00)	0.512*** (0.00)
<i>Time dummies</i>	Yes	Yes
<i>Industries dummies</i>	Yes	Yes
<i>Number of Obs</i>	2199	2199
<i>Overall R-square</i>	0.184	0.207
<i>Lagrangian Multiplier (ch2)</i>	249.59**	184.08**
<i>Hausman test (p value)</i>	0.127	0.205

This table reports the estimates of random effects model. The dependent variable in both regressions is the ratio of investment expenditure to the total assets. The Lagrangian Multiplier (LM) test is used to test the random effects model versus the pooling regression with the null hypothesis that cross-sectional variance and time-series variance components are zero. The significant χ^2 values indicate that random effects model outperforms pooled regression. The Hausman specification test is used to test the fixed-

effects model versus the random effects model with the null hypothesis that individual effects are uncorrelated with other regressors in the model. The insignificant p-value indicates that random effects model outperform fixed effects model. P-values, adjusted for heteroskedasticity, are reported in brackets. * Significant at 10%, ** significant at 5%, *** significant at 1%.

The results in Column 1—in which no control variables are included—report that firms respond positively to their available growth opportunities. More specifically, the estimated coefficient on growth opportunities is positive and strongly significant at 1% level. Next, somewhat unexpectedly, the political connections induce a positive but statistically insignificant effect on the investment expenditure, thereby indicating that political connections are not a significant predictor of firms' investment expenditure. Furthermore, the coefficient on interactive term is found negative and statistically significant at 5% level. The magnitude of coefficient indicates that firms with political connections, on average, have 5.2% lower investment efficiency than non-connected firms⁷⁷.

Importantly, the results hold even when the control variables are included in the estimation, as shown in Column 2. The coefficient on growth opportunities remains positive and significant at 1% level. Furthermore, politically connected firms are not significantly different in investment expenditure than those without connections. Finally, political intervention in investment efficiency is still found to be negative and statistically significant, thus implying that, even after controlling for firm-level effects, connected firms have, on average, a lower investment efficiency of 4.3%. Results support our conjecture that investment inefficiencies is one of the channels of political intervention.

⁷⁷ Recall that a negative sign on interactive term indicates that sensitivity of investment expenditure to investment opportunities, investment efficiency, is distorted by firm's political connections.

Regarding the effects of the firm's characteristics on investment expenditure, results partially support the predictions of firm investment literature. The coefficient on cash flow variable (CF) is positive but notably statistically insignificant, thus indicating that internal capital is not an important determinant of investment expenditure of Pakistani firms. Next, as expected, firm size (SIZE) has a positive and significant effect on firm investment expenditure. It can be interpreted that large firms invest more when compared against their small counterparts. Since firm size proxies for the importance of knowledge and capital intensity—proportion of intangible assets, and the share of fixed capital—it is then not surprising that there is higher investment spending amongst large firms. Finally, firm leverage (LEVERAGE) exerts a significant negative effect on investment. The most persuasive argument is the increasing cost of capital due to the degree of financial leverage; which can be seen to adversely affect firm investment. This finding corroborates most studies examining the impact of corporate financing on investment (for example, Aivazian *et al.*, 2005; Lang *et al.*, 1996).

In summary, the results from Table 6.4 support the hypothesis of the negative effect of political intervention on firm investment efficiency. Moreover, results support the notion that political intervention acts as another friction, which ultimately increases agency cost for connected firms and thus averts firms from making optimal investment decisions. It is worth noting that political intervention is found significant for investment (allocation) efficiency, but not for the level of investment expenditure. The latter observation is surprising in the sense that studies carried out previously have documented a higher investment rate for connected firms (i.e. Claessens *et al.*, 2008). Nevertheless, the results are understandable in light of politicians' opportunistic behaviour, where motivation behind decisions to misallocate investment resources rather than to increase the level of investment is clearly self-interest. Before deducing a definite conclusion, however, it is important to explore the

alternative channel of intervention, and find out to what extent political intervention in employment decisions (if any) is used as a source of resource obliteration.

Excessive employment

Table 6.5 reports pooled regression results for the excessive employment model. For a robustness check, the estimations are run both with and without the firms' control variables. Column 1 reports the result of simple specification, which relates employee productivity to a dummy variable, separating connected firms from non-connected firms. The estimated coefficient on variable political connections is both negative and statistically significant at 5% level. This result suggests that firms with political ties have lower productivity per employee, thus suggesting the presence of excessive employment. In terms of the estimated magnitude of political effect, connected firms are found to have, on average, 8.7% excessive employment than their non-connected peers. The results hold even when control variables are included in the estimation, as shown in Column 2. The estimated coefficient is significant at 5% level, and the magnitude indicates that connected firms have 7.1% excessive employees. The negative correlation of labour productivity with political connections corroborates the hypothesis that excessive employment is one of the channels of political intervention, with the main motive of the politicians recognised as transferring rents to supporters. This, together with supportive univariate findings for excess employment goes in line with the results shown in Bertrand *et al.* (2007).

Table 6.5: Impact of political connections on employment size

Independent Variables	(1)	(2)
<i>PC</i>	-0.087** (0.01)	-0.071** (0.01)
<i>GROWTH_OPP</i>		0.030** (0.02)
<i>CF</i>		0.051 (0.43)
<i>SIZE</i>		0.008 (0.61)
<i>LEVERAGE</i>		-0.017 (0.34)
<i>CONSTANT</i>	0.361*** (0.00)	0.600*** (0.00)
<i>Time dummies</i>	Yes	Yes
<i>Industries dummies</i>	Yes	Yes
<i>Number of Obs.</i>	2199	2199
<i>Adjusted R-square</i>	0.108	0.204
<i>Lagrangian Multiplier (ch2)</i>	152.85	113.26

This table reports the estimates of pooled regression. The dependent variable in both regressions is the ratio of profitability to total number of employees. The Lagrangian Multiplier (LM) test is used to test the random effects model versus the pooling regression with the null hypothesis that cross-sectional variance and time-series variance components are zero. The insignificant chi2 values indicate that pooled regression outperform random effects model. P-values, adjusted for heteroskedasticity, are reported in brackets. * Significant and 10%, ** significant at 5%, *** significant at 1%.

Following, attention is directed towards the effect of control variables on employee productivity. Firms' financial resources and size are not significant, thus indicating that these factors are not important determinants of employee productivity. However, the variable capturing firm growth opportunities is positive and statistically significant, therefore supporting the view that growing firms maintain higher productivity owing to their efficient resources management.

In sum, the results presented in Table 6.4 and Table 6.5 lend support for the notion of political intervention reducing operational efficiencies. In addition, the results strengthen the view that political interference in corporate activities is another type of market friction that drives firms into inefficient business decisions. Collectively, we are now able to indicate the channels through which additional financial resources—as documented in Khwaja & Mian (2005)—are utilised (in fact, wasted) by connected firms. These channels include investment inefficiencies and excessive employment. Importantly, note that the effect of interference is more pronounced for the latter channel, which seems a somewhat striking result. However, the literature on political patronage offers very contradictory evidence amongst almost every work, which might be rationalised by its own arguments. We may think of two such arguments.

First, a substantial fraction of the connected firms in Pakistan are located in the constituencies of the connected politicians⁷⁸. Given that unemployment is regarded as a major social problem in Pakistan, and under the assumption that voters are myopic, we may assert that voters' support binds with employment opportunities. Accordingly, in order to maximise electoral support in electoral districts, politicians have to provide supporters with employment opportunities.

Second, one can think of employment favours as a part of an exchange relationship between politicians and supporters. As Robinson & Torvik (2005) indicate, the politicians in fact face commitment problems as they have to honour their promises. Such promises of job provision

⁷⁸ For instance, Ittafaq Textile Mills and Khalid Siraj Textile Mills, are owned by Nawaz Sharif (former Prime Minister) located in his constituency in the city of Lahore. Similarly, Gujarat Silk Mills is connected to Chaudhry Pervaiz Elahi (Member of National Assembly) and is located in his constituency in the city of Gujarat; and Tandlianwala Sugar Mills is linked with Humayun Akhtar Khan (former Commerce Minister) located in his constituency of Lahore.

in election campaigns by politicians, with the intent of wooing potential voters, are relatively popular. Presumably, a politician who diverts from his promised course of action reduces his likelihood of being elected again. This argument is close to what is known as ‘clientelism’ in the literature of political science, where a politician distributes jobs or special favours in exchange of electoral support⁷⁹. Intuitively, clientelism is more pertinent to low-income economies, such as that of Pakistan, where voters’ allegiance is cheaper to buy with employment offer.

6.5.2 Differential impact of political connections on high- and low-growth firms

Prior financial research argues that investment opportunities available to a firm cause variations in financial policies, mainly investment. For instance, Smith & Watts (1992) found that firms with more growth opportunities employ less debt for their investment and distribute fewer dividends. Similarly, Gaver & Gaver (1993) and Gul (1999) report that growing firms generally maintain A lower debt-to-equity ratios. Viewing the relationship between growth opportunity and leverage from a political economic perspective, one may posit that high-growth firms that rely less on debt financing are, in fact, less dependent on political connections (as political connections matter most through preferential credit). Consequently, political involvement in business operation is expected to be lower⁸⁰. Empirically, this conjecture is tested in this section by stratifying the sample into two broad categories, namely high-growth firms and low-growth firms.

To examine this premise empirically, following Belghitar *et al.* (2011) and Dessi & Robertson (2003), the sample is stratified into three groups based on firms’ growth

⁷⁹ For detailed discussion on clientelism see Robinson and Verdier (2003).

⁸⁰ Moreover, finding in previous chapter (section 5.6.4) also asserts that performance of connected firms with high growth opportunities is not distorted by their political connections. Thus, of great interest is the comparison of political interference across firms with high and low growth opportunities.

opportunities, measured as price–earnings ratio. More specifically, the sampled firms are arranged in an ascending order based on averaged price–earnings ratio for the period 2002–2010, the upper 40% representing high-growth firms, the lower 40% representing low-growth firms, whilst the remaining 20% of firms in the middle were dropped. We estimate both investment efficiency and excessive employment models for the two sub-samples separately.

Panel A in Table 6.6 presents the results of the investment efficiency model. The regression results show that growth opportunities enter with positive and significant coefficients for both high- and low-growth firms. The magnitude of coefficient indicates that firms with more growth opportunities tend to have higher investment expenditure than firms with low growth opportunities. Following the definition of investment efficiency (sensitivity of investment expenditure to investment opportunities), it may be inferred that high-growth firms are more efficient in investment decisions than low-growth firms. As mentioned earlier, the coefficient on political connections is positive but insignificant. Following, the estimated coefficient on the interactive term shows that connections influence the investment decisions of both types of firm. Nevertheless, the effect of political influence on investment efficiency is relatively smaller for high-growth firms, which can be interpreted as reflecting less investment inefficiencies. Regarding control variables, the results remain largely unchanged with the exception of size, which loses statistical significance for both sub-samples.

Table 6.6: Differential impact of political connections on high and low growth firms

<i>Panel A: Investment efficiency model</i>			<i>Panel B: Employment model</i>		
<i>Variables</i>	<i>Dependent variable:</i>		<i>Variables</i>	<i>Dependent variable:</i>	
	<i>INVESTMENT</i>			<i>EMP-PROD</i>	
	<i>High growth</i>	<i>Low growth</i>		<i>High growth</i>	<i>Low growth</i>
<i>GROWTH-OPP</i>	0.127** (0.02)	0.080* (0.06)	<i>PC</i>	-0.068*** (0.00)	-0.072** (0.01)
<i>PC</i>	0.007 (0.19)	0.015 (0.24)	<i>GROWTH_OPP</i>	0.042* (0.08)	0.023** (0.02)
<i>PC * GROWTH-OPP</i>	-0.038** (0.04)	-0.041** (0.01)	<i>CF</i>	0.074 (0.13)	0.038 (0.10)
<i>CF</i>	0.025 (0.41)	0.027 (0.30)	<i>SIZE</i>	0.004 (0.62)	0.013 (0.45)
<i>SIZE</i>	0.318 (0.61)	0.164 (0.73)	<i>LEVERAGE</i>	-0.008 (0.13)	-0.011 (0.19)
<i>LEVERAGE</i>	-0.003* (0.08)	-0.004** (0.02)			
<i>CONSTANT</i>	0.443*** (0.00)	0.281*** (0.00)	<i>CONSTANT</i>	0.401*** (0.00)	0.726*** (0.00)
<i>Time dummies</i>	Yes	Yes	<i>Time dummies</i>	Yes	Yes
<i>Industries dummies</i>	Yes	Yes	<i>Industries dummies</i>	Yes	Yes
<i>Number of Obs</i>	908	842	<i>Number of Obs</i>	908	842
<i>Overall R-square</i>	0.179	0.135	<i>Adjusted R-square</i>	0.143	0.204

Panel (A) & (B) represent the estimates for investment efficiency and employment models, respectively. The investment efficiency model is estimated by random effects model and employment model is estimated using pooled regression. The dependent variables in Panels (A) & (B) are the ratio of investment expenditure to the total assets and the ratio of profitability to the total number of employees, respectively. P-values, adjusted for heteroskedasticity, are reported in brackets. * Significant and 10%, ** significant at 5%, *** significant at 1%.

In the next test, the alternative channel of inefficiency—excessive employment—is examined, with the employment model re-estimated separately for the high- and the low-growth firms. Results are shown in Panel B of Table 6.6. A similar pattern of results emerges from the estimations as in Table 6.4. Both types of connected firm have excessive employment. Statistically, high-growth, connected firms appear to be slightly less subject to employment inefficiencies by the politicians.

Overall, the results support the conjecture that connected firms with high growth opportunities experience political interference less often than their counterparts with low growth opportunities. Moreover, consistent with the earlier finding, the effect of interference is more pronounced in employment decision. Finally, the analysis is also coherent with the findings of Zheng & Zhu (2010), although the context is different; they investigate the effects of political involvement in China, whilst this analysis focuses on Pakistan.

6.5.3 Impact of political connections across industries

It is well recognised that firms' financing policies, growth -opportunities and performances exhibit significant variation across industries. Literature on corporate finance (Ross *et al.*, 2008; Frank & Goyal, 2009; Hovakimian *et al.*, 2001) often reports such inter-industry differences. Essentially, firms within an industry face common forces that influence their operational decisions. Such forces may appear as product market interactions or as competitive intensity. These may also appear as industry heterogeneity in the internal asset composition, business risk factors, technology, or regulatory standards (Frank & Goyal, 2009). Moreover, Biatour *et al.* (2011) and Bradley *et al.* (1984) describe that the intensity of R&D, advertising expenditures, level of cash holdings and earning volatility all help in terms of explaining inter-industry variations in the firm's economic decisions. Following these arguments, it is posited that unique industry-specific factors also affect the extent of political interventions and corporate operational inefficiencies, and subsequently cause dissimilarities in investment and employment decisions across the industries.

In an attempt to empirically test this conjecture, the investment efficiency and employment models on various industries is estimated separately in order to detect the way in which political connections influence the investment and employment decisions of each firm within

the same industry. The econometric analysis is confined to four of the largest sectors, which constitute over 80% of the sample. These industries include Food & Tobacco, Basic Industries including petroleum, Construction, and Textiles & Trade. The distribution of the sample across industries is provided in Table 6.1.

The regression results of the investment efficiency model are shown in Panel A of Table 6.7. The estimated coefficient on the interaction of political connections and growth-opportunities is negative and statistically significant for three industries with the exception of the Construction industry. This indicates that political connections influence the investment efficiencies of firms belonging to Food & Tobacco, Basic Industries, and Textile & Trade. Notably, the magnitudes of coefficients show that the effect of political inefficiencies is significantly higher for the Food & Tobacco industry. Regarding results of other variables, all four sectors have positive response to available investment opportunities; however, the level of investment expenditure against available growth opportunities is higher in Construction industry. We may attribute this finding to the surge of real estate business in Pakistan in the last decade. Further, firm size is found to be significant only for Basic Industries & Petroleum and Construction industries. Lastly, cash flow does not seem to have any impact on investment expenditure of firms in any industry.

Following, tests are carried out in order to investigate the alternative channel of inefficiency (excessive employment) across the industries; results are shown in Panel B of Table 6.7. The firms connected to politicians experience excessive employment problem, irrespective of the industry to which they belong. Statistically, the Textile & Trade industry is subject to most political interferences in the employment decision, whilst Basic Industries is found to experience least political interferences. As for as control variables are concerned, growth

opportunities insert positive impact on the employment productivity of all industries, except Construction industry. In contrast, firms' financing decisions in terms of leverage have positive impact on labour productivity only in Construction industry. Finally, the remaining two variables, namely, cash flow and size do not find to have any significant effect on labour productivity.

Taken together, the findings suggest that political intervention is higher for Food & Tobacco industry and Textile & Trade industry. One plausible explanation for this is that, in the context of Pakistan—particularly in our sample—politically connected firms are more concentrated in these two industries, which may cause such a pattern of political interferences to occur. The Textile & Trade is the largest industry in Pakistan, accounting for approximately 40% of the total manufacturing within the country. Three notable families—namely Arain, Chinioti Sheikhs and Jalundhari Sheikhs—control the largest business groups in the Textile & Trade industry. These families not only dominate the industry but also the political sense of the region (Islam, 2007). Further, *The News*, a Pakistani newspaper, reports that in excess of 50% of the total sugar mills in the country (78 in 2009) are owned by main political leaders⁸¹. Such facts provide a good theoretical reason to believe that industries with a high proportion of politically connected firms are most likely to suffer high political intervention in terms of investment inefficiencies and excessive employment. Overall, this finding emphasises the significance of political connectedness as an important determinant of inter-industry heterogeneity; hence, this facet needs to be taken into account when examining cross-industry variations.

⁸¹ Sugar mills belong to Food & Tobacco industries.

Table 6.7: Impact of political connections across industries

<i>Panel A: Investment efficiency model</i>					<i>Panel B: Employment model</i>				
<i>Variables</i>	<i>Dependent variable: INVESTMENT</i>				<i>Variables</i>	<i>Dependent variable: EMP-PROD</i>			
	<i>Food & Tobacco</i>	<i>Basic Industries & petroleum</i>	<i>Construction</i>	<i>Textile & Trade</i>		<i>Food & Tobacco</i>	<i>Basic Industries & petroleum</i>	<i>Construction</i>	<i>Textile & Trade</i>
<i>GROWTH-OPP</i>	0.089** (0.02)	0.080* (0.05)	0.135*** (0.00)	0.069** (0.01)	<i>PC</i>	-0.059*** (0.00)	-0.015** (0.01)	-0.032*** (0.00)	-0.074* (0.06)
<i>PC</i>	0.015 (0.22)	0.009 (0.14)	0.041 (0.19)	0.005 (0.27)	<i>GROWTH_OPP</i>	0.021* (0.05)	0.054** (0.04)	0.040 (0.17)	0.013** (0.02)
<i>PC * GROWTH-OPP</i>	-0.058** (0.04)	-0.019*** (0.00)	-0.021 (0.10)	-0.026** (0.02)	<i>CF</i>	0.046 (0.32)	-0.038 (0.36)	0.015 (0.29)	0.062 (0.41)
<i>CF</i>	0.106 (0.90)	0.044 (0.82)	0.014 (0.71)	0.010 (0.76)	<i>SIZE</i>	0.026 (0.70)	0.011 (0.58)	-0.015 (0.64)	0.002 (0.61)
<i>SIZE</i>	0.117 (0.11)	0.069* (0.09)	0.162* (0.08)	0.026 (0.14)	<i>LEVERAGE</i>	-0.043 (0.30)	-0.016 (0.28)	0.068** (0.35)	0.010 (0.54)
<i>LEVERAGE</i>	-0.002 (0.11)	-0.001** (0.04)	0.022 (0.10)	-0.013** (0.04)					
<i>CONSTANT</i>	1.084*** (0.00)	0.270*** (0.00)	0.642*** (0.00)	1.27*** (0.00)	<i>CONSTANT</i>	0.988*** (0.00)	1.016*** (0.00)	0.614*** (0.00)	0.312*** (0.00)
<i>Time dummies</i>	Yes	Yes	Yes	Yes	<i>Time dummies</i>	Yes	Yes	Yes	Yes
<i>Number of Obs</i>	292	450	304	721	<i>Number of Obs</i>	292	450	304	721
<i>Overall R-square</i>	0.114	0.267	0.408	0.241	<i>Adjusted R-square</i>	0.228	0.170	0.209	0.254

Panel (A) & (B) represent the estimates for investment efficiency and employment models, respectively. The investment efficiency model is estimated by random effects model and employment model is estimated using pooled regression. The dependent variables in Panels (A) & (B) are the ratio of investment expenditure to the total assets and the ratio of profitability to the total number of employees, respectively. P-values, adjusted for heteroskedasticity, are reported in brackets. * Significant and 10%, ** significant at 5%, *** significant at 1%.

6.5.4 Firm's characteristics and political inefficiencies

Our regression analyses confirm a direct link between the business decisions (investment and employment) and political connections; however, there may also be indirect links between these two through interactions with variables that are known to be associated with the firm's investment and employment decisions. Earlier related studies recognise that firm with sufficient resources (both financial and non-financial) enable them to accumulate stronger political connections and accordingly extract more political rents from such these links. For instance, Faccio (2006, 2010) indicates that political connections are more widespread amongst firms with large internal and external financial resources. Similarly, Fraser *et al.* (2005) and Charumilind *et al.* (2006) report the higher value of political connections for the large firms. Thus, the extent to which political gain varies across firms depends a great deal on the firm's specific characteristics.

To examine the potentially interactive effects, the control variables are interacted with the main variable of interest in the respective models. In particular, in the investment efficiency model, the interaction term GROWTH-OPP×PC is interacted with the control terms used in the model, namely: CF, SIZE, and LEVERAGE. Similarly, for employment model, PC is interacted with GROWTH-OPP, CF, SIZE, and LEVERAGE. Econometrically, we introduce three double interactive terms into the investment efficiency model: GROWTH-OPP×PC×CF, GROWTH-OPP×PC×SIZE, and GROWTH-OPP×PC ×LEVERAGE, and four interactive variables are introduced in the employment model: PC×GROWTH-OPP, PC×CF, PC×SIZE and PC×LEVERAGE.

Results for the investment model are reported in Panel A of Table 6.8. The coefficients on the given interactive terms measure the way in which the relation between political connections

and investment efficiency differs across the relevant firm's characteristics. The coefficients on the control variables of baseline model change at a larger extent compared with those in Table 6.4. Cash flow reverses the direction of the relationship, but ultimately remains statistically insignificant.

Table 6.8: Regression analysis using interactive variables

<i>Panel A: Investment efficiency model</i>		<i>Panel B: Employment model</i>	
<i>Variables</i>	<i>Dependent variable: INVESTMENT</i>	<i>Variables</i>	<i>Dependent variable: EMP-PROD</i>
<i>GROWTH-OPP</i>	0.082** (0.01)	<i>PC</i>	-0.044* (0.05)
<i>PC</i>	0.016 (0.28)	<i>GROWTH_OPP</i>	0.018** (0.04)
<i>PC * GROWTH-OPP</i>	-0.034** (0.02)	<i>CF</i>	0.074 (0.030)
<i>CF</i>	-0.004 (0.36)	<i>SIZE</i>	0.002 (0.41)
<i>SIZE</i>	0.261* (0.08)	<i>LEVERAGE</i>	0.056 (0.44)
<i>LEVERAGE</i>	-0.009 (0.72)	<i>PC* GROWTH_OPP</i>	0.051** (0.02)
<i>PC * GROWTH-OPP*CF</i>	-0.002 (0.85)	<i>PC*CF</i>	0.019 (0.73)
<i>PC * GROWTH-OPP*SIZE</i>	0.164** (0.01)	<i>PC*SIZE</i>	-0.029** (0.01)
<i>PC * GROWTH-OPP*LEVERAGE</i>	0.014 (0.20)	<i>PC* LEVERAGE</i>	-0.014 (0.58)
<i>CONSTANT</i>	0.184*** (0.00)	<i>CONSTANT</i>	0.510*** (0.00)
<i>Time dummies</i>	Yes	<i>Time dummies</i>	Yes
<i>Industries dummies</i>	Yes	<i>Industries dummies</i>	Yes
<i>Number of Obs.</i>	2199	<i>Number of Obs.</i>	2199
<i>Overall R-square</i>	0.118	<i>Adjusted R-square</i>	0.134

Panel (A) & (B) represent the estimates for investment efficiency and employment models, respectively. The investment efficiency model is estimated by random effects model and employment model is estimated using pooled regression. The dependent variables in Panels (A) & (B) are the ratio of investment expenditure to the total assets and the ratio of profitability to total number of employees, respectively. P-values, adjusted for heteroskedasticity, are reported in brackets. * Significant and 10%, ** significant at 5%, *** significant at 1%.

Furthermore, leverage loses statistical significance. Regarding new interactive variables, only the interactive term of $GROWTH-OPP \times PC \times SIZE$ enters the investment efficiency model with statistical significance. This indicates that political connections are linked with investment decisions—both directly and indirectly—through firm size. The positive sign on interactive term shows that political influence on investment decisions is higher in the case of large connected firms.

Subsequently, we perform regression analysis on the employment model using interactive terms. The results are shown in Panel B of Table 6.8. The coefficients of the non-interactive variables remain materially the same as in Table 6.4. Regarding the interactive terms, two interactive terms are found significant. Firstly, $PC \times GROWTH-OPP$ is positive and significant, supporting the findings mentioned in Section 6.5.2. The findings suggest that efficient resource management and less reliance on political capital—which results in political intervention—enable growing firms to yield high labour productivity. Secondly, $PC \times SIZE$ is found to be statistically significant. The negative coefficient on interactive term supports the political economy view postulating that large firms provide a greater resource base for politicians to target with their objectives; therefore, such firms are more subject to the demands of politically motivated employment.

6.5.5 Industry-adjusted measures

In analysis, there is a potential concern of heterogeneity in investment and employment decisions across different industries. More specifically, there is the concern that firms' sensitivity of investment expenditure to investment opportunities is unique to the industry to

which it belongs⁸². Firms in an industry face common forces that affect their investment decisions; therefore, there exist vast industry differences in the available growth opportunities and the firm's response to such opportunities. Similarly, homogeneity in the productivity function of sampled firms is also a question. Such factors cause heterogeneity between industries. In order to alleviate these concerns and verify the robustness of the results presented in Table 6.4 and Table 6.5, three industry-adjusted variables are used in our estimations, namely industry-adjusted growth opportunities, industry-adjusted investment expenditure, and industry-adjusted employee productivity⁸³. In aggregate, by doing so, industry adjusted variables remove shocks to investment and employment productivity that are similar to the entire industry.

In the empirical work, the measurement of industry-adjusted variables is carried out as follows. Industry-adjusted growth opportunities is defined as: [(growth opportunities of firm i) minus (median value of growth opportunities for all firms in firm i 's primary two-digit SIC industry)], industry-adjusted investment expenditure is proxied as [(investment expenditure of firm i) minus (median value of investment expenditure for all the firms in firm i 's primary two-digit SIC industry)]; and finally, the industry-adjusted productivity of the employee is computed as [(employee productivity of firm i) minus (median value of employee productivity for all firms in firm i 's primary two-digit SIC industry)]. Note that the two-digit SIC distributes the sample into twelve individual categories, which is regarded as being too

⁸²Since it is well known that financing decisions exhibit significant differences across the industries. Literature on corporate finance such as Gilson (1997) and Frank and Goyal (2009), routinely indicate inter-industry variations in investment decisions.

⁸³ This test is done as a robustness check since we have already controlled the industry with industry dummies effects (as an alternative technique) in our earlier estimations. Nevertheless, the role of the industry variables in capturing sector specific effects has been called into question (Mairesse and Sassenou, 1991). They argue that instead of using industry variables to pick up related effects it might be more appropriate to introduce direct industry measures. Thus, following Lang *et al.* (1996), we re-estimate our results with the industry-adjusted variables.

in-depth for this study; therefore, following Aharony *et al.* (2010) and Campbell (1996), this study re-classifies the two-digit SIC to a narrower eight-industry category.

Panel A of Table 6.9 presents the regression estimates of the investment efficiency model obtained after adjusting dependent and a key explanatory variable (growth opportunities) for industry effects. Again, support for the hypothesis of investment inefficiencies is established. Although estimated coefficient for the interactive term is smaller than that in the case without industry adjustments (0.043), the direction of the relationship and statistical significance nevertheless satisfy the hypothesis of political influence on the investment decisions. Following, the employment model is estimated with the industry-adjusted dependent variable. Results shown in Panel B confirm the findings garnered previously. The negative correlation of industry-adjusted employee productivity with political connections does not negate the hypothesis that employment is one of the objectives held by politicians (as aforementioned, low productivity is an indication of excess employment, and here we find that political connection reduces the industry-adjusted employee productivity which is taken as a symptom of excess employment). Overall, it can be concluded that the support for both hypotheses is robust to industry-adjusted measures.

Table 6.9: Regression analysis using industry-adjusted variables

<i>Panel A: Investment efficiency model</i>		<i>Panel B: Employment model</i>	
<i>Variables</i>	<i>Dependent variable:</i> <i>INVESTMENT</i>	<i>Variables</i>	<i>Dependent variable:</i> <i>EMP-PROD</i>
<i>GROWTH-OPP</i>	0.091* (0.01)	<i>PC</i>	-0.066* (0.06)
<i>PC</i>	0.015 (0.26)	<i>GROWTH_OPP</i>	0.042** (0.02)
<i>PC * GROWTH-OPP</i>	-0.028** (0.01)	<i>CF</i>	0.079 (0.38)
<i>CF</i>	0.060 (0.56)	<i>SIZE</i>	-0.012 (0.55)
<i>SIZE</i>	0.286 (0.61)	<i>LEVERAGE</i>	-0.022 (0.19)
<i>LEVERAGE</i>	0.004 (0.14)		
<i>CONSTANT</i>	0.206** (0.01)	<i>CONSTANT</i>	0.454*** (0.00)
<i>Time dummies</i>	Yes	<i>Time dummies</i>	Yes
<i>Industries dummies</i>	Yes	<i>Industries dummies</i>	Yes
<i>Number of Obs.</i>	2199	<i>Number of Obs.</i>	2199
<i>Overall R-square</i>	0.204	<i>Adjusted R-square</i>	0.093

Panel (A) & (B) represent the estimates for investment efficiency and employment models, respectively. The investment efficiency model is estimated by random effects model and the employment model is estimated using pooled regression. The dependent variables in Panels (A) & (B) are the ratio of investment expenditure to the total assets and the ratio of profitability to total number of employees, respectively. P-values, adjusted for heteroskedasticity, are reported in brackets. * Significant and 10%, ** significant at 5%, *** significant at 1%.

6.5.6 The Heckman two-stage approach

To address the possible endogeneity issue, Heckman two-stage model is applied on both investment efficiency and excessive employment models independently. More specifically, this approach is used to control for the firm's selection into political activity on the basis of investment and employment efficiencies. The first stage of Heckman model is probit equation where dummy variable, PC, is regressed against instrument variable 'location' which takes the value 1 if firm is located in two largest cities of Pakistan, namely, Lahore and Karachi.. In addition, all control variables used in equations 1&2 which also relate to the choice of

political activity are also used as regressors. The second stage of this model is identical to the equations outlined above for investment and employment, Equations (1 & 2), except the addition of the Inverse Mills ratios in these equations. By doing so, we may explicitly check whether political connectedness still influences corporate investment and employment decisions after controlling for self-selection because of unobservable information. Results are shown in Table 6.10.

Table 6.10: Regression analysis using Heckman two-stage approach

<i>Panel A: Investment model</i>		<i>Panel B: Employment model</i>	
<i>Variables</i>	<i>Dependent variable: INVESTMENT</i>	<i>Variables</i>	<i>Dependent variable: EMP-PROD</i>
<i>GROWTH-OPP</i>	0.096*** (0.00)	<i>PC</i>	-0.064*** (0.00)
<i>PC</i>	0.019 (0.26)	<i>GROWTH_OPP</i>	0.026* (0.07)
<i>PC * GROWTH-OPP</i>	-0.046** (0.03)	<i>CF</i>	0.066 (0.29)
<i>CF</i>	-0.019 (0.86)	<i>SIZE</i>	0.006 (0.35)
<i>SIZE</i>	0.231* (0.07)	<i>LEVERAGE</i>	0.022 (0.11)
<i>LEVERAGE</i>	-0.004*** (0.00)	<i>Inverse Mills ratio(λ)</i>	0.064 (0.20)
<i>Inverse Mills ratio(λ)</i>	0.101 (0.31)		
<i>CONSTANT</i>	0.273*** (0.00)	<i>CONSTANT</i>	0.404*** (0.00)
<i>Time dummies</i>	Yes	<i>Time dummies</i>	Yes
<i>Industries dummies</i>	Yes	<i>Industries dummies</i>	Yes
<i>Number of Obs.</i>	2199	<i>Number of Obs.</i>	2199
<i>Overall R-square</i>	0.235	<i>Adjusted R-square</i>	0.294

This table reports the second-stage results from the Heckman selection model. Panel (A) & (B) represent the estimates for investment efficiency and employment models, respectively. The investment efficiency model is estimated by random effects model and employment model is estimated using pooled regression. The dependent variables in Panels (A) & (B) are the ratio of investment expenditure to the total assets and the ratio of profitability to the total number of employees, respectively. The inverse Mills ratio is obtained from the probit regression (first-stage of Heckman selection model). P-values, adjusted for heteroskedasticity, are reported in brackets. * Significant and 10%, ** significant at 5%, *** significant at 1%.

The inverse Mills ratio is not significant for both the investment inefficiency and the excessive employment models. It indicates that our results do not suffer sample selection bias. Our coefficient for the effect of political connections on the sensitivity of investment expenditure to investment opportunity maintains the same negative sign as in the earlier specifications. Similarly, the coefficient of the political connections in excess employment model is also negative and statistically significant. Thus, we may conclude that after controlling effects of unobserved information which may influence firms to be politically active, there is still a significant negative effect of political connectedness on investment and employment decisions.

6.5.7 Political inefficiencies across government periods

In this section, it is recognised that the data sample period covers two elected government terms. Amongst these governments, the first government, 2002-2007, is led by a military dictator, whilst the second is a democratic civil government, 2008-2010. Hitherto, political environment for entire sample period is considered as uniform. However, now as robustness check, we distinguish between these two government periods and partition the sample period into first-government (2002-2007) and second-government periods (2008-2010). The underlying argument, as discussed earlier in Chapter 5, is that the military dictator builds supporting political coalitions by distributing financial resources and bestowing political power to them (Escriba-Folch & Wright, 2010). Consequently, the extent of political interferences in business operations is expected to be much higher in the dictatorial period than the civil democratic period. Empirically, we test this conjecture by re-estimating investment efficiency and excess employment models on both periods separately and compare the impacts of political connections on investment and employment decisions across government periods.

Table 6.11 reports the results of subsample regressions. In Panel A, the coefficients on PC are still insignificant in both the government periods. Next, the interaction term has negative and significant coefficients indicating the presence of investment inefficiencies in both government periods. The magnitude of coefficients on interaction term is not considerably different across the periods. Thus, we may not claim higher extent of investment inefficiencies in the dictatorial regime as compared to the democratic regime. Among control variables, firm size and leverage continue to insert positive and negative impact on investment expenditure, respectively. The regression results in Panel B indicate that the estimated coefficients on PC are negative in both government periods. More specifically, the coefficients of PC in the first government and the second government periods are 0.092 and 0.057, respectively. It represents that the extent of political interference is higher in the first-government period supporting our argument of higher level of political patronage in the dictatorial regime. The results for control variables remain largely unchanged as presented in Table 6.5.

In summary, it is found that political connections insert similar effect on firm investment decision in both government periods, whereas exert a large negative effect on firm employment decision in the first government period. These findings support the view that excessive employment is an important channel through which politicians benefit themselves and this practice is more pronounced in the dictatorial regime.

Table 6.11: Regression analysis across political regimes

<i>Panel A: Investment model</i>			<i>Panel B: Employment model</i>		
<i>Variables</i>	<i>Dependent variable:</i>		<i>Variables</i>	<i>Dependent variable:</i>	
	<i>INVESTMENT</i>			<i>EMP-PROD</i>	
	<i>First-government</i>	<i>Second-government</i>		<i>First-government</i>	<i>Second-government</i>
<i>GROWTH-OPP</i>	0.096*** (0.00)	0.101*** (0.00)	<i>PC</i>	-0.092** (0.01)	0.057** (0.04)
<i>PC</i>	0.009 (0.18)	0.012 (0.24)	<i>GROWTH_OPP</i>	0.028** (0.04)	0.031** (0.04)
<i>PC * GROWTH-OPP</i>	-0.037** (0.01)	-0.035** (0.04)	<i>CF</i>	0.048 (0.60)	0.056 (0.87)
<i>CF</i>	-0.044 (0.96)	-0.028 (0.81)	<i>SIZE</i>	0.009 (0.56)	0.008 (0.62)
<i>SIZE</i>	0.290** (0.03)	0.307* (0.09)	<i>LEVERAGE</i>	-0.014 (0.28)	-0.021 (0.30)
<i>LEVERAGE</i>	-0.012** (0.01)	-0.007*** (0.00)			
<i>CONSTANT</i>	0.383*** (0.00)	0.241*** (0.00)	<i>CONSTANT</i>	0.357*** (0.00)	0.479*** (0.00)
<i>Time dummies</i>	Yes	Yes	<i>Time dummies</i>	Yes	Yes
<i>Industry dummies</i>	Yes	Yes	<i>Industry dummies</i>	Yes	Yes
<i>Number of Obs.</i>	2199	2199	<i>Number of Obs.</i>	2199	2199
<i>Overall R-square</i>	0.282	0.184	<i>Adjusted R-square</i>	0.227	0.316

This table reports the second-stage results from the Heckman selection model. Panel (A) & (B) represent the estimates for investment efficiency and employment models, respectively. The investment efficiency model is estimated by random effects model and employment model is estimated using pooled regression. The dependent variables in Panels (A) & (B) are the ratio of investment expenditure to the total assets and the ratio of profitability to total number of employees, respectively. First-government and second-government comprised of periods from 2002-2007 and 2008-2010, respectively. P-values, adjusted for heteroskedasticity, are reported in brackets. * Significant and 10%, ** significant at 5%, *** significant at 1%.

6.5.8 Economic welfare cost of political inefficiencies

In this section, an attempt is made to quantify the economy-wide cost of excessive employment. It seems rather audacious to estimate the economic cost at large of the political interference in the connected firms since there are likely varieties of other costs related with the excessive employment that are not measured. Nevertheless, in this case, the objective is merely to approximate the costs that can be concluded from the results. Theoretically, a

welfare loss only arises if the real return (labour productivity) on employees' investment is less than that of resources invested elsewhere.⁸⁴ Empirically, this cost of excessive employment is calculated by comparing the labour productivity of connected firms with that of non-connected firms.

Following Claessens *et al.* (2008) and Khwaja & Mian (2005), welfare loss is estimated through two steps. First, the differential in Tobin's Q is taken in order to measure the difference in employment investment return. Importantly, here we assume that Tobin's Q captures only the efficiency of employment investment rather than the overall investment, which includes both employment and non-employment investment. As can be seen in Equation 3, the coefficient of the interaction between political connections and Tobin's Q—defined as the market value of equity plus book value of the total debts divided by the book value of the total assets—is negative, therefore indicating that Tobin's Q of the connected firms is 0.031 lower than non-connected firms⁸⁵. This represents the misallocation of capital through excessive employment amongst connected firms. Second, if we next assume that employment size is the direct representation of investment level in employment, the coefficient of PC in Table 6.5 can be inferred as the annual employment investment of connected firms as 0.071 higher than non-connected firms. Combining these estimates, it can be established that welfare loss from excess (inefficient) employment is 0.220% (0.071% × 0.031% =) each year of the average firm's total assets.

$$Tobin\ Q = -0.031\ PC + 0.742 \quad (3)$$

⁸⁴ Employee investment mostly refers to capital investment that firms make in the workplace for employee inducement, such as pay, benefits, career opportunities (Romzek, 1990).

⁸⁵ The pooled regression includes industry and time effects and R² of the estimation is 0.084.

On average, our sample of 380 firms—including both connected and non-connected—comprises total assets of approximately 1,400 million PKR in 2010. Assuming that employment investment distortion is similar for all 380 listed firms, the gross welfare cost of the political interference in the connected firms is approximately 1.8 billion PKR ($= 380 \times 1400 \times 0.00220$) each year, or about 0.19% of GDP annually (GDP of Pakistan in 2010 was 618,530 million PKR). Note that this figure is substantially smaller than the estimates of Khwaja & Mian (2005) for Pakistan. One should bear in mind that we estimate only the cost of distortion in the employment investment. In addition, our sample is relatively small, and includes only listed non-financial firms. Therefore, we caution against generalising this outcome more broadly in the context of any on-going policy debate on political patronage.

6.6 Conclusion

Unlike the previous studies that concentrate on the firm's advantages of political connections, in this chapter, focus is instead directed towards the opposite perspective. Specifically, we investigate the possible adverse impacts of political intervention in business operations in two ways: investment inefficiencies and excessive employment. The analysis is based on a sample of 2,199 firms' year observations of Pakistani-listed firms for the period 2002–2010. The results support our hypotheses that political intervention adversely affects business investment and employment decisions. More specifically, investment efficiency—measured as sensitivity of investment expenditure to investment opportunities—is distorted by political intervention; however, political intervention has a significant effect on investment (allocation) efficiency, but not on the level of investment expenditure. Regarding corporate employment decisions, the negative correlation of labour productivity with political connections indicates that excessive employment is one of the channels of political intervention that impairs employment behaviour. Importantly, the distortional effect of

political involvement is greater for firms' employment decisions than investment decisions. The results are robust to industry-adjusted measures of investment expenditure, growth opportunities, and employee productivity. In sum, we conclude that political interference in Pakistan harms the overall efficiency of firms' investment, and distorts employment decisions. Taken together, the result, whilst certainly worthwhile by itself, presents insights into the forces that shape investment and employment decisions, particularly in less developed economies.

The differential effect of political interference on low- and high-growth opportunity firms is further examined. The results show that connected firms with high growth opportunities experience political interference less often than their peers with low growth opportunities. Regarding the effects of firms' characteristics, results show that political interference in investment decisions is greater in large connected firms than small firms. Moreover, we have shown that our base results are robust to sample selection bias. Further, the extent of political patronage in terms of excess employment is higher in first-government period. Finally, our estimates show that there is a welfare loss of 0.15% of GDP each year due to employment distortion from political interference.

CHAPTER 7: CONCLUSION

7.1 Introduction

The aim of this concluding chapter is to summarise the results of this research and provide some possible ideas for future research. The subsequent section briefly restates the main purpose of this research study. This will be followed by the review of empirical results of the three analytical chapters. The contributions of the study are discussed in the next section. Finally, the last section discusses the limitation of the study and suggests some future research avenues.

7.2 Summary of the research questions

Political connections is a prevalent phenomenon around the world; however, it is argued widely that the prevalence of political connections is considerably higher in developing countries where an external governance structure is ineffective. Essentially, dependence on relational contracting through establishing political connections stems from inadequacies in formal institutions and market intermediaries that make arm's-length contracting unreliable. From this perspective, political connections might be seen as a substitute for ineffective financial system; however, essentially, the purpose of firms establishing connections with politicians is to gain political favours with significant economic value. Despite a considerable amount of research attempting to examine the role of political capital in developing economies, thus far, relatively little is known about the detailed workings of political connections.

The purpose of this research is to depict a complete picture of the function of political capital by investigating the detailed working of political connections in the developing economy. For this purpose, data is used from Pakistan over the period 2002–2010. By employing Pakistani

firm-level data, the study addresses the following three fundamental political economy questions:

1. Do political connections help connected firms in accessing leverage?
2. What is the impact of political connections on the performance of connected firms?
3. What are the channels through which politicians may influence the business operational efficiencies?

7.3 Research findings

In order to accomplish the aforementioned research objectives, this study has been classified into three parts: the first part (Chapter Two) is theoretical in nature, and provides a survey of literature on the firm leverage, performance, and the impact of political connections on financing policy and performance; the second part (Chapter Three) describes the data used in this study; and lastly, the third part is empirical in nature and comprises three analysis chapters. The first empirical chapter (Chapter Four) examines the impacts of political connections on the level of leverage of the connected firms. It is followed by Chapter Five, which concerns the impacts of political connections on the performance of the connected firms. The last chapter (Chapter Six) studies the channels through which politicians intervene in business activities. The main findings of this study are presented here, which are based on the results of the three empirical chapters.

Political connections and leverage: New evidence from Pakistan

Using pooled regressions, Chapter Four tests the significance of political connections in terms of access to leverage. The estimated coefficient on political connections has a positive value, which is found to be statistically significant. It indicates that the connected firms—

defined as if its director participates in an election—are more levered than non-connected firms. Results support the political lending hypothesis in the Pakistani credit market. In the next step, leverage is divided based on debt maturity, and dependent variables are redefined as long-term leverage and short-term leverage. Results show that the positive effect of connections remained only for long-term loans, whilst the firm's political connections do not have any effect on short-term finance. The overall results remained significant after controlling for the firm characteristics. In sum, results provide evidence of preferential treatment of the connected firms and show that political connectedness appears to be a determining factor of financing decision of firms operating within the Pakistani market.

This chapter extends this analysis further by examining whether or not this preferential treatment varies with the strength of the firms' politician, particularly whether it affects whether or not politician holds office or belong to the ruling party. For this purpose, connected firms are stratified according to the strength of their politician by introducing two dummies in the baseline specification. The first dummy discerns the firms belonging to the winning or losing politician; the second dummy differentiates between the firms having politicians that are members of the winning party or the opposition party. In order to empirically test this conjecture, two separate pooled regressions were run in order to check the politician winning effect and party winning effect. Results show that having connections with a winning politician or politician affiliated to the winning parties (coalition) has a larger impact on the firm's total and long-term leverage, implying that the benefits associated with political connections depend on the electoral outcomes.

Subsequently, this chapter focuses on the role of firm-specific characteristics in financing the decisions of connected firms. The regression results find limited support for the importance

of these determinants in explaining access to leverage. More specifically, the positive effect of political connections is driven mainly by the firm size and business group affiliation. In other words, firm size and business group affiliation have an increasing effect on the borrowing capabilities of the connected firms. On the other hand, connections underplay the significance of collateral. Firms with connections with politicians are seen to need much less collateral to borrow than firms without connections. Lastly, the remaining standard firm characteristics that are widely used as determinants of leverage—namely: profitability, growth opportunities, and foreign ownership—do not seem to play any significant role in financing decisions of the connected firms.

As a robustness check, baseline results are re-estimated mainly in two ways: first, to take into account the possible endogeneity issue pertaining to the relation between political connections and leverage, the regression is re-estimated using the Heckman two-stage model; and second, in order to facilitate the comparison with prior studies, the alternative definition of growth opportunities, Tobin's Q, is used in the estimation. The achieved results are robust to potential endogeneity issues, and alternative estimation techniques.

Political connections and firm performance: New evidence from a developing country

The next empirical study (Chapter Five) examines the impact of political connections on firm performance. To measure firm performance two accounting-based proxies, namely return on assets and return on equity are utilised. The empirical strategy in this chapter is based on the instrumental variable approach, two-stage regression analysis. Using the panel data of Pakistani listed firms ranging 2002–2010, the regression results show that those firms with political connections have poorer performance when measured as return on assets than non-connected firms. Similar results are found for return on equity—an alternative measure of

performance. The results for both measures are sustained when the other potential determinants of firm performance are controlled.

The chapter proceeds to analyse whether or not the impact of connectedness on performance differs systematically in different political environments. The sample period, notably 2002–2010, covers two contrasting government terms: the first elected government (2002–2007) is led by a military dictator, whilst the second is a democratic civil government (2008–2010). In this regard, considering the different political nature of the governments, the impact of connections is expected to be different in both government periods. The literature on authoritarianism asserts that military dictator builds supporting political coalitions whose loyalty is largely dependent on obtaining patronage resources from the dictator (Escriba-Folch & Wright, 2010). In order to maintain such coalition, it is necessary for the dictator to distribute benefits to the coalition. The extent of political patronage therefore tends to be much higher in military dictator regime than civil democratic government. If this is the case, when considering the positive effect of political connections on firm performance, it may be argued that the value of political connections in terms of firm performance should be higher in dictatorial regime. In order to conduct this analysis, the sample is stratified into two broad categories: first-government period and second-government period. The cross-sectional regression based on standard model of performance is then estimated for each sample separately. More specifically, in the first government period, firm performance (as the dependent variable) in 2007 and explanatory variables over the period 2002–2006 are measured, and for the second-government period, firm performance (as the dependent variable) in 2010 and explanatory variables over the period 2008–2009 are measured.

Using the two-stage cross-sectional regression, it can be seen that the estimated coefficient on political connections is negative and significant for both periods; however, in contrast to this prediction, the magnitude of coefficients show that the negative impact of connections is more pronounced in the first-government period, providing evidence of excessive managerial inefficiencies and the rent-extraction of affiliated politicians in the dictatorship regime.

From the above analysis, it can be seen that a direct relationship has been established between political connections and firm performance. In the subsequent step, the indirect effect of political connections via firm-specific characteristics is examined in relation to the performance of the connected firms. More specifically, whether or not the negative relationship between political connections and firm performance varies across firm groups is examined based on size, ownership and group affiliation. The estimated coefficients on the interaction terms between size and political connections, and business group and political connections, are statistically significant. Consistent with our sub-hypothesis, the negative coefficient on interactive term between size and political connections suggests that the large firms are subject to more severe performance distortions than small firms. Moreover, the positive coefficient on business group and political connections indicates that the performance of connected firms increases if they also belong to business groups.

In the context of growth opportunities available to firms, a similar estimation exercise for the high- and the low-growth sub-samples was carried out, as in the last chapter. The positive and significant coefficient on high-growth firms indicates that political connections exert positive impact on the performance of firms with more growth options. The result is in line with the hypothesis and the earlier findings of the previous chapter (Chapter Four), which, owing to less dependence on debt, shows that the performance of the growing firms is not distorted by

the connected politician. On the other hand, the performance of low-growth firms has an inverse relationship with political connections, thus emphasising that political connections distort performance. Overall, results indicate that firms with low growth opportunities are prone to the negative effects associated with political connectedness on their performances.

Finally, at the end of Chapter Five, the sensitivity analysis is run in order to check the robustness of the main results. For this purpose, a market-based measure of performance, Tobin's Q, is adopted so as to examine the robustness of base model results. The estimated results remain unchanged with the Tobin's Q as a dependent variable, which shows the robustness of the earlier results.

Political connections and operational inefficiencies: Evidence from a developing country

Chapter Six examines the relationship between political intervention and the efficiency of business operations. More specifically, it investigates the channels through which politicians intervene in the business activities. To examine this research premise, two possible operational inefficiencies that political interventions may cause are proposed: the investment inefficiency and the excess employment. In the empirical strategy, two independent empirical models are estimated: the former investigates the effects of political intervention on investment, whilst the latter examines employment decisions. Using the Pakistani listed non-financial firms from 2002–2010, results for the first investment efficiency model show that the sensitivity of investment expenditure to investment opportunities is weaker for connected firms, thus supporting the hypothesis of investment inefficiencies caused by political interferences. On the other hand, the negative relationship of employee productivity with political connections lends evidence to the hypothesis that excessive employment is one of the channels of political intervention. Importantly, the effect of interference is more

pronounced for employment decisions. Our results reveal that the presence of clientelism in the Pakistani market—where politicians maximise the electoral support by distributing jobs—favours in exchange of electoral support.

Following the idea of the previous chapters, this chapter also examines whether or not political intervention relates to the growth opportunities available to firms. As noted earlier, the sample is un-pooled in relation to high- and low-growth firms, and baseline models are re-estimated for sub-samples. The results achieved support this conjecture, and further show that the connected firms with high growth opportunities experience political interference less often than their peers with low growth opportunities. Subsequently, this chapter seeks to explore the indirect links between these two through interactions with variables that are known to be associated with the firm's investment and employment decisions. Results show an indirect link between political intervention and operational efficiencies through firm size and ownership.

This chapter also deals with the potential concern of heterogeneity in investment expenditure across different industries. More specifically, in an attempt to control the industry differences in the sample, industry-adjusted variables are employed in the baseline models. With the industry-adjusted variables, results confirm that political relationships distort the investment and employment decisions of the connected firms.

Finally, in an attempt to depict the severity of this problem within the economy, this chapter offers a sense of economy-wide costs caused by political intervention. The results demonstrate that an additional 0.15% of GDP is lost each year owing to such political distortions in employment decisions.

7.4 Research contribution

We conduct three independent empirical studies in order to achieve the aforementioned objectives of the thesis. The contribution of each empirical study is as described below.

The first study makes both theoretical and empirical contributions to the literature, which builds-up the political capital debate. The findings are salient with on-going research on the applicability of the Trade-off and Pecking order theories. Considering the preferential treatment to connected firms in the credit market, easy access to credit allures these firms to maintain high leverage, which contends the proposed financing hierarchy of Pecking order theory. In addition, political connections substitute the importance of physical assets as collateral in financing decisions, which notably contradicts the predictions of Trade-off and Pecking order theories. From an empirical perspective, the results first enrich the extant literature on corporate patronage by exploring both the relation between connections and leverage, and the impact of political strength of connected politicians on corporate leverage. In so doing, the leverage is split on the basis of maturity structure, and provides evidence, for the first time, that the impacts of connectedness are more pronounced for long-term debt. Largely, our results lend support to the crony capitalism view that Pakistani firms benefit from political connections. Prior empirical research in this sphere is based mainly on data from the US and other developed economies with a private, or quasi-private, banking sector. Employing data from Pakistan facilitated the examination of the politics-leverage nexus in a state-controlled banking environment that varies significantly from those of other countries. Secondly, this analysis adds to those studies focused on the traditional determinants of financing decision—particularly in developing economies. Furthermore, the analysis emphasises the significance of political connectedness as an important determinant of leverage that cannot be overlooked.

In order to pursue the second objective of the thesis, we contribute to the literature on political connections and firms' performances in several ways. Firstly, the study contributes to Agency theory by identifying political connections as a source of agency problem that deteriorates firm performance. Secondly, we examine the impact of political connections on firm performance in two contrasting political settings, namely the autocratic regime and the democratic regime. Thirdly, our work broadens the literature on political connections by demonstrating that the impact of political connectedness on firm performance is subject to political environment (autocratic and democratic), which shows a step towards reconciling the mixed empirical findings on corporate political connections. Although previous studies have extensively documented the relationship between growth options and firm performance, this has nevertheless been generally unheeded in the political connection's standpoint. To fill this gap, this study considers the role of growth opportunities and identifies that the impact of political connectedness on firm performance can be shaped by growth opportunities available to a firm. Lastly, the study provides a useful addition to the nascent strand of literature on the impacts of ownership structure on firm performance in the developing economies.

Finally, the third study contributes to the literature mainly in three ways. Firstly, we empirically investigate hypotheses based on theoretical perspectives on business operations in the same study. Secondly, it identifies and demonstrates investment inefficiencies and excessive employment as channels through which political connections affect the firm's economic decisions. In other words, the study recognises political connections as a market friction, which increases agency cost and ultimately averts firms from making optimal decisions. By showing this, study adds an explicit dimension to the Agency cost theory that is not found in conventional principal-agent literature. Thirdly and finally, the study contributes

to the corporate investment literature, which is based mainly on standard corporate finance theories. The results indicate the significant role of political ties in the decision of capital investment; thus, it can be stated that firm investment decisions cannot be effectively studied without consideration being directed towards the dominant effects of corporate political connections.

In sum, the results provide new insights into the ways in which political connections operates, and also deepens understanding of the consequences of political connections. More specifically, it is hoped that light we shed on the relationship between the politicians and businesses will enrich the existing understanding of business dynamics in developing economies. These results are not particular to only one country; rather, these findings might be generalised to other economies characterised by similar political and institutional settings.

7.5 Limitations and suggestions for future research

This research examines the business–politics relationship, and further provides insight into the workings of the political connections. However, limitations do exist in this study, which also highlights the future research avenue.

Firstly, this study identifies corporate political connectedness through corporate Boards of Directors; other mechanisms geared towards establishing political relations—such as lobbying and advocacy advertising—have not been incorporated in the study. It is worth suggesting, therefore, that a larger research study be conducted by including alternative methods of establishing political ties, which may able to identify and contrast the impacts of various corporate political activities on firm-level outcomes. Provided that the theoretical arguments

and findings here are not simply set aside, such a research would indeed be a stimulating reassessment of the results presented in this study.

Secondly, the unavailability of data could not facilitate the identification of the year when political connections were established; therefore, as a natural extension of this research, one could measure the impact of political connections by contrasting the financing policies, performance, and operational efficiencies of firms in pre-and post-connection periods.

On a related point, owing to the constraints of data availability, an interesting dimension that has not been taken into consideration in this study is the alternative rent-seeking mechanism. As in the first empirical chapter, the impact of political connections is examined on firm leverage; however, other channels through which benefits are accrued are not included in the study. As Desai & Olofgard (2011) highlight, in developing nations where cronyism is a pernicious feature of their economies, such channels typically take the form of lower taxation, subsidies, greater market shares, and import quotas. Thus, expanding the study by including such mechanisms of rent-seeking may prove beneficial in terms of widening our understanding of the relationship between politics and business, particularly in developing economies.

Thirdly, our analysis could not discern the impact of political connectedness according to geographic regions. As prior research (Li *et al.*, 2008) has shown, the effect of political connections depends on the institutional environment and regional development; the lack of access to institutional variables constrained us to pursue this research avenue. Nevertheless, when striving to investigate whether or not political connections are more important in

regions with weaker markets and inefficient legal systems remains a fruitful avenue for further study.

Fourthly, since our data comprises only listed non-financial firms, our estimates for the economy-wide costs of excessive employment could not accurately project the actual intensity of political inefficiencies problem. Listed firms, however, only represent a small portion of all Pakistani firms, and might simply be a cadre of firms decided to be listed on stock markets. There might also be other politically connected firms that have chosen to remain unlisted; hence, caution should be taken in generalising the results as their applicability might be limited to the distinct environmental context of Pakistani firms. Future research could probe the question of social welfare loss more deeply by including unlisted connected firms.

Fifthly, one interesting extension of this strand is the impact of political connectedness on the financial constraints of connected firms. As accessing external finance is a critical problem for the development of firms operating in less developed economies, therefore, these constrained firms are highly dependent on internal capital. However, some firms mitigate these financial constraints by establishing relationships with the politicians. A large body of literature (e.g. Fazzari *et al.*, 1988; Harris *et al.*, 2000) measure financial constraints through investment-cash flow sensitivity. Thus, it would be fruitful to explore this avenue further and find out whether or not political connections reduce financial constraints of the connected firms. Put alternatively, to what extent the investment cash flow sensitivity varies across connected and non-connected firms.

Regarding estimation technique, to control the sample selection bias, propensity score matching technique can also be utilized to counter-check the results of Heckman sample selection model. Propensity score matching technique is a statistical matching technique which tries to measure the impact of treatment. It yields the predicted probability of treatment obtained from the fitted regression model (Rosenbaum and Rubin 1983).

Finally, there is the suggestion that future research may address the impact of political connections on firms' cash holdings, which is regarded as being an important aspect of corporate financing policy. It would be particularly noteworthy to investigate whether political connections substitute or complement the theoretical motives of corporate cash holdings. Additionally, the question could also be posed as to whether this relationship varies across industries, as well as whether political influence is more nuanced for winning politicians. Such research questions warrant further and more in-depth investigation.

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